



R-2A Sub-Committee Meeting

April 20th, 2016

6:00 pm – 7:00 pm

City of Whitewater Municipal Building

City Manager Conference Room

312 W Whitewater Street

Whitewater, WI 53190

Agenda

Invited Attendees

Christine Munz-Pritchard
Christopher Grady
Dan Comfort
Greg Meyer
Sherry Stanek

The public is invited to attend. However, public input may not be taken during the meeting.

Discussion Items

1. Roll Call
2. Review of handouts provided by Sherry Stanek. Key issues that need to be addressed:
 - Currently the R-2a does not address the conversion of living space to additional bedrooms.
 - Currently the R-2a does not address if more than one student is allowed per bedroom.
3. Provide staff with direction for future expected actions
4. Adjournment

It is possible that a quorum of Common Council members may attend this meeting. Even if a quorum is present, no Common Council business will be conducted at this meeting.

Anyone requiring special arrangements is asked to call the Office of the City Manager / City Clerk at least 72 hours prior to the meeting.

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A Property Maintenance Code Is Good for Your Town

A property maintenance code deals with the condition of existing housing and non-residential property, including commercial or industrial land uses.

It can be controversial in communities, but usually blanket opposition comes only among people who lean libertarian or who definitely don't want to comply for some reason.



I've been responsible for code enforcement, which means that the actual inspectors reported to me. It also means dealing with angry people who think I'm just making up the rules as I go along (definitely not true in about 95% of the cases) or that my judgment call (necessary in about 5% of the cases where the law doesn't explicitly cover the situation) isn't sensible.

In spite of the hassles and the need for wise administration, I strongly encourage any well-run municipality or county to think about adopting a property maintenance code and a compatible set of other model codes as well.

The property maintenance code moves maintenance of an existing commercial building and the surrounding property from an option to a legal requirement for a responsible property owner.

When it comes to maintaining your housing stock, we think the standard property maintenance code from the International Code Council is less effective than a housing code tailored specifically to your state or area, but it's far better to adopt this standard code than to have no local laws addressing the condition of existing housing.

Groups of code officials and also builders from across the world gather in committees to debate what should be required. For more information about how these codes are written, the top organization for publishing these standardized codes, the [International Code Council](#) (ICC), explains that on their website.

If your community wants to use this property maintenance code, your city council or other governing body simply passes an ordinance (or whatever you call your local laws) referring to the name, authoring organization, and year of the code.

They also set up a local enforcement mechanism, whether through writing that process into the local adopting ordinance or simply through administrative decision-making.

Ideally someone in your city government that is going to enforce that new code sits down and reads it thoroughly, picking up on any requirement that

a more-or-less
monthly

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won't work because of a particular locally common building material, cultural custom, soil condition, or other peculiarity of your town.

Also your local expert and enforcement officer may notice that you need tougher regulations in some areas. For example, you might want to add seismic requirements if you're in an earthquake zone.

In that event, your city council just adds a list of exceptions to the ordinance adopting the property maintenance code. These could include a mix of both stiffer and more lenient provisions.

Often cities and towns won't update their requirements every time a new code comes out, which is approximately every three years for the most common codes right now.

So don't be shocked and outraged to find out that your city council is living by the 2006 version of the existing property maintenance code, just for example.

However, the easy updating is a major advantage of using a model property maintenance code as compared to developing your own code locally. While the latter is possible, it's a herculean task. You might do it once, but then doing it every three years (the current ICC interval) would get to be a real pain.

This type of code also helps deal with [abandoned factories](#) and vacant retail buildings or obsolete offices.

A property upkeep law also may address what are commonly called nuisances to some minor extent. It does prohibit accumulation of trash and debris both on the exterior and interior of a building.

A nuisance is those old barrels just sitting in the industrial yard, the junky loading dock behind a swanky retail stores, and all kinds of other messes on the rear of the property.

When towns and cities speak of their "nuisance code," it may be a collection of provisions from various adopted codes and local additions.

Other Building Condition or Construction Codes

We devoted a page elsewhere to why you should adopt a [building code](#). A building code applies to new construction, and it is critically important to safety, even more than to appearance.

There are several other codes you can consider adopting, including the following. Note that the first three collectively are sometimes lumped in with the building code in conversation.

- Plumbing code. This code sets the standards for plumbing in residential and non-residential structures.
- Electrical code. The National Fire Protection Association has held onto the [National Electrical Code](#) and pretty much controls this one.
- Mechanical code. It's possible to enact a separate mechanical code that covers mostly your heating, ventilation and cooling (HVAC) systems.
- [Existing building code](#). This code governs both housing and commercial buildings that are not new construction. It allows a more flexible set of standards to encourage rehabilitation, repair, and re-use of existing structures.
- Energy conservation code. This code provides regulations for the municipality that wants to mandate [energy conservation](#) techniques and technologies, usually within new structures.

- Wildfire prevention code. The ICC has published a 2012 Wildland-Urban Interface Code that helps deal with reducing the danger of large wildfires near subdivisions and other urban development, as well as some other issues that happen when people build in or next to wilderness.
 - Performance code. This is an approach, rather than a subject of regulation such as the other items in this list. The performance code is a flexible approach to construction. It allows any technique that "performs" to certain standards to be used.
-

Possible Conflicts Between Codes

You may adopt several codes from different sources. However, when you start adopting multiple codes because you become so excited after reading this page that you wanted one of everything, you need to be aware that you could be creating conflicting sets of rules.

So seek advice, make sure a local expert actually reads the codes, and think hard if you want to adopt more than three or four compatible codes. For example, a performance code could well be in conflict with a building code, and you may need to think about how your existing building code would interact with an energy conservation code, should you decide to add the latter.

One final note is that you are likely to hear so much about LEED® certification, a program of the [U.S. Green Building Council](#), that you may begin to think LEED® is a code too. It isn't a code, in the sense of being a law. It is similar to a code in that it sets a standard, but it's an entirely voluntary standard.

A key feature is that the certifications have different levels, as in Silver, Gold, and Platinum. In addition, the requirements for meeting a certain level of certification are somewhat flexible; there's a point system. Things that the writers of this certification think are extremely important earn more points.

Of course a few places are experimenting with making a law that says that all new buildings of a particular description must meet the standards for LEED® certification!

This program emphasizes energy conservation, the lowest possible carbon footprint for the building, using recycled materials, and generally being green.

LEED also is just one brand of "green" certification; there are others, most of which charge lower fees to the applicant.

Costs of Code Adoption

Be aware that the code companies do charge for copies of the property maintenance code and any other codes you want to purchase. However, the popular codes cost about what you would expect for a comparable soft-cover technical book. Your code inspectors and any administrators can become members of a code organization, but membership usually is not mandatory for governments that adopt the code.

LEED® certification is fairly pricey, but it's the property owner who bears the cost. We figure they are paying to add to a marketing tool primarily.

But we're saving for last the cost considerations you're going to hear about when you adopt codes. That would be the cost to the builder and ultimately the building's owner. Some people will complain loudly that adopting a code will cause the construction of their building to cost thousands of dollars more.

My advice is to listen politely to all of that. Ask your inspection staff or whoever you plan to hire for enforcement for advice about the legitimacy of

such complaints.

Ask other experts you trust, such as your own favorite carpenter, plumber, electrician, and so forth. These folks probably won't be lacking in opinions.

If it seems to you that a particular code provision is more about appearance than safety and function, certainly you can consider deleting that provision by reference when you adopt your code if you're a blue collar kind of place.

The property maintenance code shouldn't impose much in the way of costs that sensible property owners wouldn't be quite willing to pay. Basic upkeep helps property values remain stable or appreciate.

Of course, you also have to be able to afford the cost of a competent inspector and an enforcement mechanism, meaning a municipal or other court. If you're a small town, there may be opportunities to share an inspector with other nearby small towns.

But seriously, for safety's sake, provide for your town to receive the benefit of the countless hours of deliberation among national and international experts about what the building codes, and all other codes, should be.

To keep your city or town competitive in the marketplace of property values and rents, you need to force owners to pay attention through a property maintenance code.

[Home](#) > [Code Enforcement](#) > Property Maintenance Code



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Code Development Principles

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ICC develops construction and public safety codes through the governmental consensus process. This system of code development has provided the citizens of the U.S. the highest level of safety in the world for more than 80 years. The ICC governmental consensus process meets the principles defined by the National Standards Strategy of 2000; OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities (1998). It complies with Public Law 104-113 National Technology Transfer and Advancement Act of 1995. The following principles are adhered to in ICC's governmental consensus process:

Openness

- Participation in the development of the codes, including code hearings, is open to all at no cost.
- Anyone can submit a code change proposal or make a public comment.
- Code committees must consider all views before voting.

Transparency

- Evidence of committee vote, with reason, must be documented.
- Final decisions are made in an open hearing by public safety officials.

Balance of Interest

- Committee members represent general interests, user interests, producer interests, or multiple interests. One-third of the committee's members must be public safety officials.
- Committee members cannot vote on issues that are a conflict of interest.
- ICC membership is not a condition of committee membership.

Due Process

- A code change proponent has the opportunity to rebut opponents and vice versa.
- Anyone who attends the hearing can testify.
- Committees are required to consider all views, objections and the cost impact of all code change proposals.

Appeals Process

- Anyone can appeal an action or inaction of the code committee.

- ICC renders its decision on the appeal based on whether due process was served.

Consensus

- Committee members vote to approve the code change, make modifications to it, or vote against it.
- A simple majority from the committee decides the action of the proposed code change.
- ICC assembly action allows members to challenge the action of the committee.

The International Codes

- Are innovative and coordinated.
- Cannot be influenced by vested financial interests.
- Are efficient and effective.
- Are developed through the efforts of public safety officials.
- Are up to date and state of the art.
- Are revised every 18 months and new editions are published every three years.
- Are economically viable and practical.

Governmental Consensus Process

The governmental consensus process leaves the final determination of code provisions in the hands of public safety officials who, with no vested financial interest, can legitimately represent the public interest.

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Housing Decline Needs Immediate Neighborhood Attention

To avoid housing decline, a high proportion of homes in a residential neighborhood need to be well maintained, regardless of whether the area is modest or splendid.



Community stability depends on housing that matches current demand. But competition quickly drives potential buyers to other parts of your city or region if both the public street area and the private homes show neglect or disrepair.

However, if you're a victim of decreasing property values, it's more important than ever to become involved in your neighborhood and in its investment in and enforcement of maintenance and updating of the housing.

So neighborhoods should watch their most important asset, neighborhood quality as indicated by housing maintenance, very carefully. If you want to avoid housing decline, characteristics to monitor include:

- **Vacancy rate.** A healthy rate in most circumstances is considered to be about 5%. If the vacancy rate is much lower than 5%, people have trouble finding housing. A higher rate indicates a housing decline based on over-supply or lack of market interest.

During the current foreclosure crisis, it's tough to keep vacancies low in some areas, but you must try.

- **Housing tenure.** It's the technical term for whether housing is occupied by owners or renters. An owner-occupied residential neighborhood is likely to be much more stable, exhibit less turnover, and show the fruits of more pride of ownership. Unkempt rental units can quickly lead to general housing decline.

- **Trend in age and household composition of occupants.** A new subdivision often attracts people of approximately the same age, and if those people stay in place, eventually you'll have a group of older adults who are ready to leave their homes at about the same time.

If the retirees neglect maintenance, this factor alone can lead to housing decline. So [neighborhood demographic](#) trends are worth watching. ("Demographic" is a term that means population-related.)

- **Relevancy of the housing stock to the type of housing in demand.** This factor includes age, architectural style, size, number of bedrooms and bathrooms, availability of closet and garage space, off-street parking, and access to shopping, parks, and community facilities.

- Proximity of the neighborhood to jobs. If the only employer in the immediate area offers only white collar jobs and salaries, the housing types and price ranges should match. Or if fast food jobs are almost the only jobs nearby, the housing should probably be more modest.
- Affordability to an ample market of households that would like to live in the vicinity. Even the most luxurious residential neighborhood will languish if people can't afford to live there.
- Maintenance level. A residential neighborhood needs to show a high percentage of well-maintained homes to remain competitive. Since this is a free market society, it's important to remember that each neighborhood is in fact competing with dozens of choices for many households.

Only a couple of poorly maintained residences taint a block, and a few blocks showing mixed maintenance means that housing decline has arrived.

The U.S. Census collects a wealth of information about housing every 10 years, and more often in some communities. This includes the median home value, median rent, population by age, race, ethnicity, and household composition (e.g., single, single head of household, married, unrelated adults, and so forth).

It may show the age of housing, number of bathrooms, and other interesting trivia for the time period and geographic unit of analysis of interest.

If you have a local planning office or extension office, by all means ask them to obtain and analyze your housing data. Pester your planning department to do a customized housing inventory.

Sometimes these are called housing condition surveys. Obtain statistics on violations from your code enforcement department, if your city does [code enforcement](#).

How to Reverse Housing Decline

A mild case of the blahs in the maintenance of your neighborhood might be cured by a robust effort in neighborhood marketing. Check out the Center for Community Progress tips on conducting a [neighborhood marketing](#) campaign.

If something more serious is involved in addition, though, policy makers at the community level need to decide what incentives for private investment they can offer. That might be anything from marketing to offering financial incentives or publicizing state tax credits for reinvestment.

A municipal government also can invest in capital improvements, such as street or sidewalk repairs, street trees, street lighting, trails, local playgrounds, or [streetscape](#) to attempt to make the neighborhood more attractive.

If maintenance and remodeling are needed, the government can streamline the building permit process, offer seminars on common repairs or remodeling projects, assemble a tool lending library, or perhaps administer low-interest loans in a part of the city that qualifies for the use of federal Community Development Block Grant money.

Depending on the state, it may be possible to offer additional incentives. Older housing may qualify for historic building reinvestment credits. It may be possible to form a neighborhood improvement district.

If a community has dominant employers on its outskirts, but is suffering from housing decline, it may be possible for the employers to provide capital to [start a community development corporation](#) that then would make low-interest loans and offer technical assistance for repairs in the nearby residential neighborhood.

When demand is insufficient, by the way, occasionally employers will offer employee incentives to purchase homes in the neighborhood. Such a program helps employees, but also preserves property value and prestige for the employer.

If many homeowners are older and unable to address housing decline, it may be possible to organize college students or other volunteers for an occasional blitz day in which painting, caulking, and other periodic maintenance activities are brought up to date.

If market demand appears to be adequate, but maintenance is inadequate, the municipality should probably undertake a concentrated code enforcement sweep through the neighborhood, taking a few blocks a year if need be.

In the situation where market demand is inadequate, pause to think about whether code enforcement will make the situation better or worse.

In the home metro area of one of our writers, St. Louis, it's popular for municipalities to require what is called an occupancy permit when a home or apartment changes occupants.

An exterior and interior inspection are performed, and before a new occupant is allowed, all violations of the current code must be corrected. Who pays for the correction is often a subject of negotiation in the real estate deal.

The positives of this system are that it does stem housing decline providing there are enough changes in occupancy. It also accomplishes periodic updating of housing, particularly with regard to changing electrical needs and ever more sophisticated safety considerations.

The negative is that if many owners stay in their homes for 25 years, other code enforcement programs will be needed if the exterior is neglected.

Reducing the Number of Housing Units in Buildings

Another issue that caused housing decline in large cities in times of housing shortage, particularly in the wake of the high rate of new household formation after World War II, was conversion of large homes into apartments.

And sometimes in profitable markets, spacious apartments are converted into smaller apartments in the chase for an even larger profit.

If you have too much multi-family housing for current demand, try to convert some of it back to larger units, including single-family homes if possible.

On the other hand, if you have a neighborhood of very large older homes that is beginning to show signs of housing decline, the architecture might make it possible for you to convert those homes into two- or three-family units. Try to make them condominiums if you can.

To the extent people in your community can afford home ownership, cultivate that. It does make for a greater investment of time, talent, and pride in the community.

If the Neighborhood Is Deteriorating

City governments often take a paternalistic stance toward neighborhoods, but in most regions they can't afford this attitude any longer. The neighborhoods make the city, and if the neighborhoods show signs of housing decline, the process of reversing the situation can be very costly indeed.

Not only is the financial cost greater the longer maintenance is deferred, but also the difficulty in creating a positive buzz multiplies as small maintenance issues remain unaddressed.

Towns, cities, and rural areas must address any tendency toward housing decline immediately. Most communities can absorb a few eyesores and a few mistakes, but don't let a situation get out of hand before you act.

Special Problems That Lead to Lack of Homeowner Investment

It's tough to maintain neighborhood quality when a large amount of student housing is situated nearby. Just do the best you can to work with the college or university, and try to get them to accept some responsibility for the situation. Perhaps they can have a minimum maintenance standard for apartments they recommend or list for their students.

Work with the landlords directly, since probably they are making a nice profit on their student apartments. The municipal government may have to use its leverage in this situation as well.

Another jarring development can be a large influx of immigrants or refugees of other than the dominant ethnicity. Sometimes the cultural characteristics of one group are highly offensive to another group.

In one city the habit of large and loud family gatherings on the front lawn on Sunday afternoons threatened a community revolt. At the other end of the spectrum, it's very common for rural residents to become very upset, and probably justifiably so, when city dwellers move to the country and then demand not to be awakened by the crowing of the roosters.

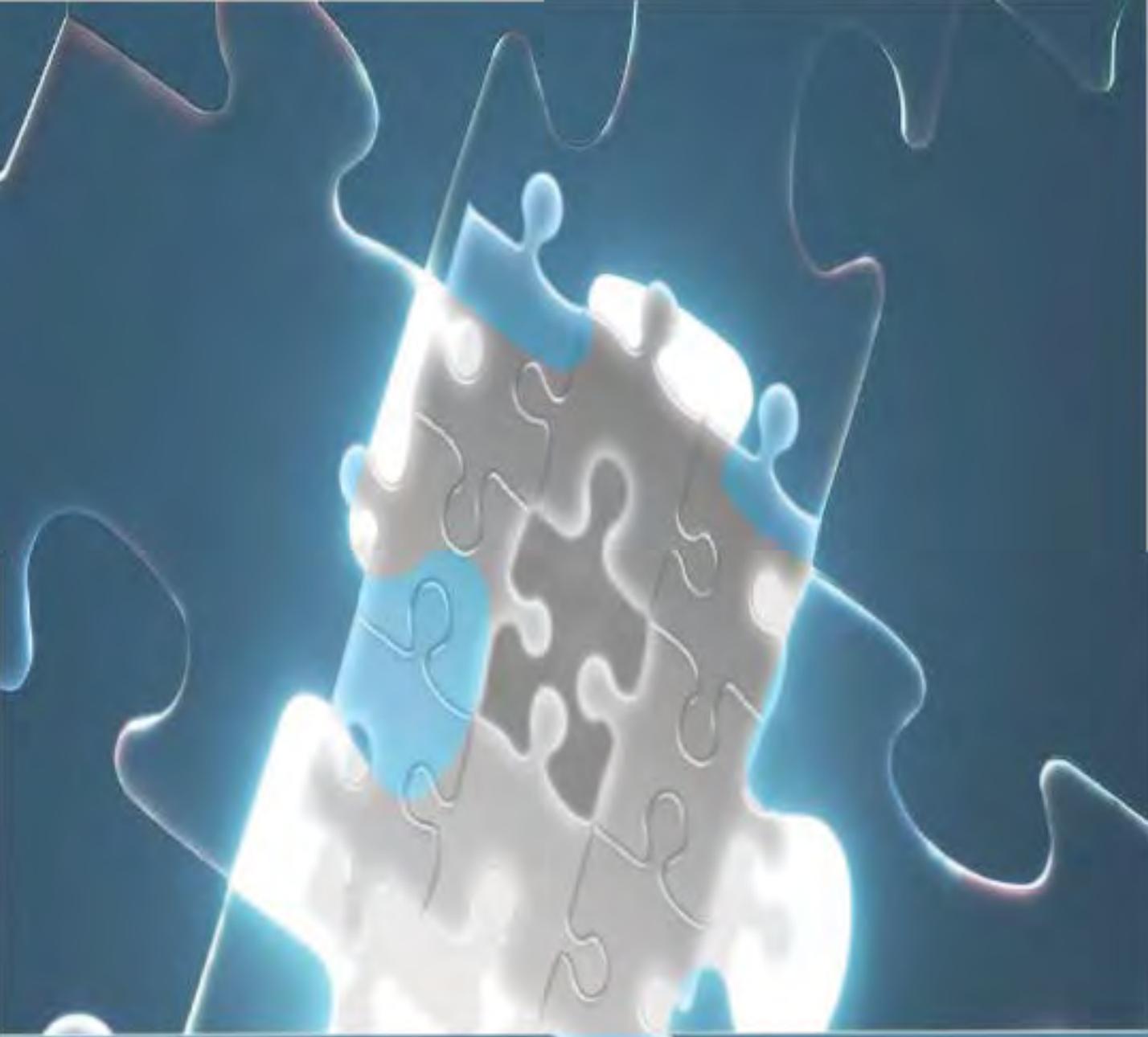
Just remember that housing decline is harder to reverse the further it progresses. And housing decline and neighborhood decline can't be separated.

Use that certainty with your local government and with any local institutions that are invested in the neighborhood to try to rally all the assistance possible in creating an upward spiral rather than a downward one.

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Measuring Overcrowding in Housing



U.S. Department of Housing and Urban Development
Office of Policy Development and Research

PD&R

Measuring Overcrowding in Housing

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Measuring Overcrowding in Housing

Introduction

The U.S. Department of Housing and Urban Development (HUD) funds the U.S. Census Bureau to conduct the American Housing Survey (AHS), a biennial record of the physical characteristics, quality, and condition of the nation's housing stock and of the characteristics of the households in occupied housing units. Separate AHS surveys provide periodic examinations of the housing stock in 21 major metropolitan areas.

In 2006, HUD contracted with Econometrica, Inc. and ICF International to support the production and use of the AHS. As part of that contract, HUD commissioned a study of overcrowding and how alternative definitions could be quantified using the AHS. Specifically, HUD asked the Econometrica team to explore alternative ways to define overcrowding, and to base those alternatives on what is known about the consequences of overcrowding.

We conducted this research in two parts. The first being a literature review focused on the consequences of overcrowding. We should note that HUD directed us to focus on the consequences of overcrowding for occupants and to not consider the consequences for neighbors. Specifically HUD advised us to ignore the issues of large immigrant households or households composed of many college students that are frequently discussed in newspaper articles or the popular press.

After performing an extensive literature review, it is clear that there are only a few accepted definitions of overcrowding. And of these definitions, persons-per-room (PPR) is the measure most prevalent in the literature. In this report, we utilized multiple definitions in conjunction with the AHS National data to demonstrate how overcrowding changed over time from 1985 until 2005. Our report is organized as follows:

- Section 1 presents alternative definitions of overcrowding as well as key findings from our literature review. We explore both the generally accepted measure of *persons-per-room* as well as other alternate definitions.
- Section 2 presents a summary of the different measures that were applied to the AHS and what these measures demonstrated at a high level.
- Section 3 extends the analysis in Section 2 by examining how overcrowding affects various segments of the population using each of the overcrowding measures.
- Section 4 presents our conclusions and potential next steps.

1. Definitions of Overcrowding

The most common measure of overcrowding is persons-per-room in a dwelling unit. Prior to starting our research, we understood that other popular definitions of overcrowding included: the total number of persons in a unit, regardless of unit size; the ratio of persons to floor space in square feet; and the person-to-size ratio adjusted for household composition, structure type, location, or lot size. We were interested in exploring as many of these measures as possible during our literature review to identify the best measures to capture overcrowding and the most appropriate standards.

We began our research using the extensive bibliography of a relevant research paper, “The Impact of Homeownership on Child Outcomes” (Haurin, Haurin, Parcel, 1999), web searches of Google and KnowledgePlex, and recommendations of colleagues well-versed in a variety of connected subject matters. Our preliminary research led us to journals ranging from *Child Development* to *Land Economics*. After reviewing the articles in these journals, and finding less than relevant material, we met with HUD to discuss how to re-focus our search. The agreed upon approach was to examine the prevalence of communicable diseases in overcrowded environments and the effects they have on a child’s growth and development. And of these, we focused primarily on Meningitis, Hepatitis, and Tuberculosis. These three disease vectors were in addition to looking at the effects of second-hand smoke and household hazards in overcrowded homes. Our shift in focus was fortunate as we found a report commissioned by the United Kingdom Office of the Deputy Prime Minister in 2004 that answered the key questions posed in this research task.

“The Impact of Overcrowding on Health and Education: A Review of the Evidence and Literature” was commissioned in late 2003 by the United Kingdom Office of the Deputy Prime Minister and uses chiefly primary resources and studies.¹ This report, hereafter referred to as the UK ODPM report, was the most recent and most comprehensive report we found during our literature review. The UK ODPM report identified the known impacts of overcrowding on people’s health and education, and dispelled some common misconceptions. The analysis focused on physical and mental health, childhood growth, development and education, in addition to personal safety and accidents. The review contained a bibliography of 97 articles and summarized the key conclusions of most research reports with respect to the potential relationships or associations of overcrowding.

The UK ODPM report did not attempt to recommend either a single overcrowding measure or a single standard. Instead, it recognized the benefits of multiple definitions depending on the variables being evaluated. But the two measures most evident in the 97 studies were persons-per-room (PPR) and/or persons-per-bedroom (PPB).

The standards applied to these measures are noteworthy and are included below. Figure 1 presents the standards reported for PPR and then PPB, by each health vector.

¹ The United Kingdom Office of the Deputy Prime Minister. “*The Impact of Overcrowding on Health & Education: A Review of Evidence and Literature.*” Office of the Deputy Prime Minister Publications, 2004.

Figure 1: Overcrowding Standards for PPR and PPB Included in the UK ODPM Report

Measure	Standard
PPR	
Physical Health	
Child Mortality	>1.50
Respiratory Conditions	>1.00
Children's Bronchitis	>1.50
Meningococcal Disease in Children Under 5 yrs.	>1.50
Stomach Cancer Mortality	>1.00
Mental Health	
Psychiatric Symptoms	>1.00
Mental Illness	>0.75
Reading and Mathematical Testing	>1.50
Personal Safety	
Accidents	>1.50
Child Maltreatment	>1.00
PPB	
Physical Health	
Meningitis	Not given
H. Pylori Infection	>2.00
Childhood Health, Development, and Education	
School Performance	>2.00

Source: The United Kingdom Office of the Deputy Prime Minister. *“The Impact of Overcrowding on Health & Education: A Review of Evidence and Literature.”* Office of the Deputy Prime Minister Publications, 2004.

The above figure shows that the overcrowding standard for PPR most often reported is a standard of more than 1.5 while PPB has a standard of two. In our analyses, we used a standard of two (2) for PPB but for PPR, instead of the 1.5 persons-per-room standard, we used a standard of more than one (>1). We felt a standard of more than one for PPR was both a more conservative as well as a more intuitive standard for our research.

We then considered what other measures could also be explored using the AHS National data. Our choices were unit square footage-per-person (USFPP) and then a hybrid measure that blends PPR with USFPP. Figure 2 presents a summary of each of these four measures, what the standards are for each, and the estimated percentage of overcrowding evident using the AHS National data from 1985 and 2005.

Figure 2: Traditional and Alternate Definitions of Overcrowding

Measure	Discussion of Measures and Standards	% of Overcrowded Households, Using AHS National Data		% Point Change Since 1985
		1985	2005	
Persons-Per-Room (PPR)	This measure was the one most frequently seen during our literature review. The UK ODPM report reports standards ranging from greater than 0.75 to greater than 1.50.	2.82	2.41	(0.41)
	We defined overcrowding as more than one persons-per-room. The percentage of households considered overcrowded is at the right. (We also present the percentage of households overcrowded when PPR exceed 1.50, which is shown after the one persons-per-room standard.)	0.82	0.63	(0.19)
Persons-Per-Bedroom (PPB)	<p>The UK ODPM Report also included PPB as a measure of overcrowding and it reported a standard of two persons-per-bedroom. We learned from speaking with Mr. Joe Riley about Public Housing Authorities (PHA) and overcrowding that generally PHAs try to keep to two or fewer people-per-bedroom. (There is guidance about who can share a bedroom and who cannot, the circumstances of sharing, etc.)</p> <p>With the PPB measure, overcrowding occurs as values increase (e.g., a unit with 6 people and 2 bedrooms is considered more crowded than a similar unit with only 4 people and 2 bedrooms). We used a standard of two persons-per-bedroom</p>	3.25	2.65	(0.60)
Unit Square Footage-Per-Person (USFPP)	<p>Square footage is a tangible measure of crowding and is important when considering air-borne disease. The reason being that, all else held constant, human proximity is the key to disease transmission.</p> <p>We defined an overcrowding standard of 165 square feet per person. This standard was chosen because it produced a level of overcrowding equal to the 2.4 percent of the households overcrowded for PPR when using the 2005 AHS National data.</p>	3.00	2.44	(0.56)
Persons-Per-Room (PPR) by Unit Sq Foot-Per-Person (USFPP)	This measure is a mix of PPR and USFPP. We did a cross-tabulation of PPR and USFPP, using our standards of more than one person and 165 square feet. We felt this was an important measure because it highlights how households considered overcrowded under one measure might not be under another. This cross-tabulation can yield a more accurate picture of the populations who are overcrowded and the degree that they are overcrowded.	1.10	0.90	(0.20)

Note: Negative values are shown in parentheses.

Source: ICF International analysis of AHS data.

2. Overcrowding Measures

In this section we assess overcrowding using three measures: persons-per-room (PPR), persons-per-bedroom (PPB), and unit square footage-per-person (USFPP). We also analyze overcrowding using an approach that incorporates both the PPR and the USFPP measures.

2.1 Persons-Per-Room (PPR)

We use a standard for PPR of more than one person in our analysis. Note that this measure utilizes rooms and not bedrooms. This is an important distinction because many datasets contain data on rooms – in part because rooms are easy to count. PPR is instructive because while room size may vary considerably, custom and building codes will establish either a de facto or an explicit minimum size for rooms to be considered healthy and safe.

A standard of one person per room is intuitive especially when considering occupancy of the rooms which are pressed into service as sleeping quarters. These non-traditional sleeping quarters may provide a modicum of privacy to the occupant but are likely considered less than ideal by the occupant. A standard of more than one will not address privacy concerns and relative room preferences – e.g., a single person sleeping in a living room will have less privacy compared to a bedroom with a single person.

We see that in Figure 3 the percentage of people defined as being overcrowded is relatively low – totaling approximately 2.4 percent in 2005. And over time, overcrowding appears to have fallen since the rate of overcrowding fell from 2.82 percent to 2.41 percent between 1985 and 2005.

This figure also allows us to see that if the standard was no longer more than one but was instead 0.75, as one study from the UK ODPM Report noted, the rate of overcrowding fell 3.5 percentage points between 1985 and 2005. Conversely, if the standard was tightened and was more than 1.25, then the rate of overcrowding still fell between 1985 and 2005 but only by 0.34 percentage points. If the standard was further tightened, then the decrease was only 0.19 percentage points between 1985 and 2005.

The absolute degree of overcrowding using these alternative standards for PPR is also interesting. Loosening the standard to more than 0.75 meant that rates of overcrowding in 1985 were almost 18 percent, falling to 14.4 percent in 2005. But if the standard was tightened to more than 1.5, then the rates of overcrowding fall dramatically – i.e., 0.83 percent in 1985 and 0.63 in 2005.

**Figure 3: Persons-Per-Room,
Using AHS National Data**

Persons-Per-Room	1985 (%)	2005 (%)	% Point Change from 1985 to 2005	1985 Cumulative Percent	2005 Cumulative Percent	% Point Change from 1985 to 2005
0 to <0.50	50.75	58.85	8.10	100.00	100.00	0.00
0.50 to < 0.75	31.35	26.75	(4.60)	49.25	41.15	(8.10)
0.75 through 1.00	15.07	11.99	(3.08)	17.90	14.40	(3.50)
Greater than 1.00 to <1.25	0.84	0.77	(0.07)	2.82	2.41	(0.42)
1.25 to <1.50	1.15	1.00	(0.15)	1.98	1.64	(0.34)
1.50 to <1.75	0.42	0.36	(0.06)	0.83	0.63	(0.19)
1.75 to < 2.00	0.10	0.10	0.00	0.41	0.28	(0.13)
2.00 to < 2.50	0.24	0.14	(0.10)	0.31	0.18	(0.14)
2.50 to < 3.00	0.03	0.01	(0.01)	0.07	0.03	(0.04)
Greater than 3.00	0.05	0.02	(0.03)	0.05	0.02	(0.03)

Notes: 1) Negative values are shown in parentheses. 2) The change in the distribution of overcrowded and not overcrowded households from 1985 to 2005 is statistically significant at the five percent significance level.

Source: ICF International analysis of AHS data.

2.2 Persons-Per-Bedroom (PPB)

PPB is another interesting measure in that it reflects rules and standards used with assisted housing. Those rules and standards are more specific than the standard we are using (i.e., more than two) but both effectively capture overcrowding.

In order to better understand our choice for a PPB standard, it will be helpful to provide some context on housing assistance. One of the key issues in providing housing assistance is what quality of housing to provide. This issue applies equally to project-based housing assistance where the government supports the building of units to house low-income persons and to voucher assistance where the government contributes to the rent of private units occupied by low-income households. The tension in both cases is to ensure that the assisted households receive adequate housing while avoiding providing them with housing substantially superior to that occupied by unassisted households. One dimension of this quality issue is the size of the unit. It would not make sense to offer a two-person household a three-bedroom unit that could be used by a larger household.

In its periodic Quality Control (QC) studies, HUD examines whether assisted households are over-housed or under-housed with respect to the number of bedrooms. The 2003 study found that 10 percent of all households occupied a unit with too many or too few bedrooms in 2003, according to the guidelines used for the quality control study.² With respect to under-housing, the QC guidelines were that the ratio of persons to bedrooms could not exceed two. (A one-person household could occupy a zero-bedroom unit without being considered under-housed.) The QC standard is not a HUD regulation. In general, HUD requires the agents that administer

² *Quality Control For Rental Assistance Subsidies Determinations for FY 2003*, prepared for the Department of Housing and Urban Development, by ORC Macro, Calverton, MD, August 30, 2004.

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its program to ensure that households are placed in appropriate sized units. The most common HUD agents are Public Housing Authorities (PHAs) and PHAs typically require that the ratio of people to bedrooms not exceed two. Many PHAs apply additional rules that take the age and the sex of children into account. The net effect of these additional rules is that some situations where the ratio of household members to bedrooms is two would still be considered cases of under-housing.

Figure 4 demonstrates that overcrowding declined between 1985 and 2005, as quantified by PPB. The share of households with more than two people-per-bedroom decreased from 3.2 percent in 1985 to 2.6 percent in 2005. In percentage point terms, the reduction in overcrowding is somewhat higher when defined in terms of PPB as opposed to PPR.

**Figure 4: Persons-Per-Bedroom,
Using AHS National Data**

Persons-Per-Bedroom	1985 (%)	2005 (%)	% Point Change from 1985 to 2005	1985 Cumulative Percent	2005 Cumulative Percent	% Point Change from 1985 to 2005
<=2	96.75	97.35	0.60	96.75	97.35	0.60
0.1 to <0.5	6.34	10.66	4.33	96.75	97.35	0.60
0.5 to <1	26.51	33.16	6.65	90.41	86.68	(3.72)
1	33.51	30.03	(3.47)	63.90	53.53	(10.37)
>1 to <1.25	0.29	0.33	0.04	30.39	23.49	(6.90)
1.25 to <1.5	11.14	9.77	(1.37)	30.10	23.16	(6.94)
1.5 to <1.75	10.44	7.51	(2.93)	18.96	13.39	(5.56)
1.75 to <2	0.26	0.29	0.03	8.51	5.88	(2.63)
2	8.26	5.59	(2.66)	8.26	5.59	(2.66)
>2	3.25	2.65	(0.60)	3.25	2.65	(0.60)
>2 to <2.25	0.01	0.01	0.01	3.25	2.65	(0.60)
2.25 to <2.5	0.41	0.33	(0.08)	3.25	2.64	(0.61)
2.5 to <3	1.09	0.85	(0.25)	2.84	2.31	(0.53)
3 to <4	1.16	1.00	(0.16)	1.75	1.46	(0.28)
4 to <5	0.37	0.34	(0.03)	0.59	0.46	(0.13)
5 to <8.5	0.22	0.12	(0.10)	0.22	0.12	(0.10)

Notes: 1) Negative values are shown in parentheses. 2) The change in the distribution of overcrowded and not overcrowded households from 1985 to 2005 is statistically significant at the five percent significance level.

Source: ICF International analysis of AHS data.

Over the past 20 years, household size, on average, has decreased while the size of an average home has increased. These have been the main drivers behind a decrease in overcrowding as measured by the PPB metric. An increasing incidence of less than two PPB may reflect consumers understanding that housing is one of the largest purchases they will make during their lives. Consumers purchase housing not just in terms of the current period and current needs but with future needs in mind as well. For example, young couples without children may choose a house with more than two bedrooms because they plan to have children at some point in the future. This purchase pattern prevents them from needing to “upgrade” their housing choices as often as they might otherwise need to do. Another reason for an increasing incidence of less than two PPB could be the aging of America. As older Americans retain the houses they raised their children in, they will technically be considered “over-housed” by any number of measures, including PPB. It is also possible that the increase in the share of households with less than two PPB is due to a change in how consumers view or define housing space with a growing trend of each room having a well defined “function”. Thus, rooms that have previously not been used much (or were used for storage) may have been converted to a spare or guest bedroom.

One of the factors that will drive how extensively PPB is used in research will be availability of the data on the number of bedrooms in a dwelling. The kind and quality of data will vary between datasets but may be more prevalent than with number of room variables, even if the number of rooms is considered easier to count.

PPB is likely to be a measure of choice when the health effects of overcrowding are a research focus. PPB effectively captures issues of human proximity, which is a critical concern when examining infection rates and airborne disease. And as a societal norm, bedrooms continue to be an area where privacy concerns are most heavily vested.

2.3 Unit Square Footage-Per-Person (USFPP)

USFPP is a measure that quantifies the amount of available personal space. It also is a measure where inter-annum comparisons are interesting in that such comparisons can demonstrate how the size of the average house has changed over time, which in turn affects crowding patterns.

Our literature review did not yield a single, widely accepted standard for USFPP. Knowing this, we created a USFPP standard by identifying a threshold (in square feet-per-person) below which overcrowding is expected to occur. We did this by using the PPR and its standard of more than one person, which indicated 2.4 percent of the population was overcrowded in 2005. We then calculated how many square feet-per-person would match this 2.4 percent threshold. Based on our calculations, overcrowding would occur when there is less than 165 square feet-per-person. (And we include as Appendix B a figure with the distribution of the 2005 AHS National data.)

We recognize that data availability is likely to hinder widespread use of this measure. As well, those datasets that do include square foot information may use different protocols for measuring square feet. For example, are common areas included? What about hallways or porches?

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While these are valid concerns and should ensure that researchers approach this measure with caution, the AHS National datasets includes high quality square foot data. Using these data, we see that homes, on average, have become larger over the past 20 years. In 1985, households had, on average, 740 square feet per person of living space (with the median being 596 square feet per person). In 2005, the size of the living space per person has increased, on average, by almost 24 percent to 916 square feet per person (with the median of 675 square feet per person).

Figure 5 shows that using a standard of 165 square feet, overcrowding fell between 1985 and 2005, as with the other measures discussed in this section.

**Figure 5: Square Footage-Per-Person,
Using AHS National Data**

Square Feet-Per-Person	1985 (%)	2005 (%)	% Pt Change from 1985 to 2005	1985 Percent more than	2005 Percent more than	% Point Change from 1985 to 2005
0 to <165	3.00	2.44	(0.56)	100.00	100.00	-
165 to <200	2.01	1.39	(0.62)	97.00	97.56	0.56
200 to <225	2.29	1.94	(0.35)	94.99	96.17	1.18
225 to <250	2.49	1.78	(0.71)	92.69	94.22	1.53
250 to <300	5.05	3.62	(1.44)	90.21	92.44	2.24
300 to <350	6.68	5.54	(1.13)	85.15	88.83	3.68
350 to <400	5.89	4.24	(1.65)	78.48	83.28	4.81
400 to <450	6.61	5.78	(0.83)	72.58	79.05	6.46
450 to <500	5.66	4.81	(0.85)	65.98	73.26	7.29
500 to <600	10.40	9.56	(0.84)	60.31	68.45	8.14
600 to <700	9.90	9.65	(0.25)	49.91	58.89	8.98
700 to <800	7.47	7.42	(0.06)	40.01	49.24	9.23
800 to <900	5.69	6.41	0.72	32.54	41.82	9.28
900 to <1,000	4.99	5.73	0.74	26.85	35.42	8.56
1,000 to <1,500	13.07	16.21	3.14	21.86	29.69	7.82
1,500 to <2,000	4.60	6.36	1.75	8.79	13.48	4.68
2,000 to <4,500	3.92	5.53	1.61	4.19	7.12	2.93
Greater than 4,500	0.27	1.59	1.33	0.27	1.59	1.33

Notes: 1) Negative values are shown in parentheses. 2) The change in the distribution of overcrowded and not overcrowded households from 1985 to 2005 is statistically significant at the five percent significance level.

Source: ICF International analysis of AHS data.

2.4 Persons-Per-Room (PPR) by Unit Square Footage-Per-Person³ (USFPP)

PPR and USFPP are both useful measures but each has its drawbacks. For example, neither accounts for differences in the type and characteristics of housing units. In order to provide more clarity about the degree of overcrowding, we applied both definitions simultaneously to the AHS National data.

Specifically, we created a hybrid measure that is a cross-tabulation of 1) households who are overcrowded or not overcrowded under the PPR measure, and 2) households who are overcrowded or not overcrowded under the USFPP measure. As can be seen in Figures 6a and 6b, these two measures do greatly overlap, i.e., over 96 percent of all households in 2005 lived in homes with less than one persons-per-room and had 165 square feet or more of living space per person.

The cross-tabulation analysis also provides some useful information on the degree of overcrowding. Of the 2.4 percent of households who lived in homes with less than 165 square feet-per-person, about two thirds had less than one person-per-room. They lived in less crowded households compared to the remaining one third who lived in homes with more than one person-per-room. We repeated the same analysis but raised the standard to 250 square feet-per-person. Of the 6.9 percent of the households who, in 2005, lived in homes with less than 250 square feet-per-person, about three quarters lived in homes with less than one person-per-room.

Figures 6a and 6b illustrate that when assessing overcrowding, it may be best to do so using more than a single definition or measure. Using a mixed- or multi-measure approach can be helpful to policy makers in that it can provide them with a finer degree of resolution. This in turn can ensure the best allocation of limited resources in addressing this social problem.

Figure 6a: PPR by USFPP, 2005

		USFPP		
		165 or more sq ft	Less than 165 sq ft	TOTAL
PPR	Less than One	96.27	1.54	97.81
	One or More	1.29	0.90	2.19
	TOTAL	97.56	2.44	100.00

Source: ICF International analysis of AHS data.

Figure 6b: PPR by USFPP, 1985

		USFPP		
		165 or more sq ft	Less than 165 sq ft	TOTAL
PPR	Less than One	95.74	1.70	97.44
	One or More	1.26	1.31	2.57
	TOTAL	97.00	3.00	100.00

Source: ICF International analysis of AHS data.

³ Square footage pertains exclusively to one unit detached and mobile homes.

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The 1985 and 2005 AHS National data indicates that the share of truly overcrowded population (i.e., those who are considered overcrowded under both the PPR and USFPP measures) has decreased. As can be seen in Figure 7, the share has dropped by about 40 basis points⁴ from 1.3 percent in 1985 to 0.9 percent in 2005.

**Figure 7: Persons-Per-Room (PPR) By
Unit Square Footage-Per-Person (USFPP), Using AHS National data**

USFPP (Sq Ft)	PPR			
	Less than One		One or More	
	1985 (%)	2005 (%)	1985 (%)	2005 (%)
0 to <165	1.70	1.54	1.31	0.90
165 to < 500	35.49	27.89	1.19	1.22
500 to 1,000	38.39	38.74	0.06	0.02
1,000 to <1,500	13.06	16.18	0.01	0.04
1,500 to <2,000	4.60	6.34	0.00	0.01
2,000 to <4,500	3.92	5.53	0.00	0.00
Greater than 4,500	0.27	1.59	0.00	0.00

Source: ICF International analysis of AHS data.

⁴ A basis point is defined as one-hundredth (1/100th) of one (1) percent.

3. Demographic Cross-tabulations

The summary data presented in this report are increasingly granular. The tables in this section focus on whether some segments of the population have a higher incidence of overcrowding than others. We also can see whether the trend over time is similar across the different demographic subpopulations.

The demographic variables explored in this section include ethnicity and race⁵, income, tenure, region, metropolitan status, and citizenship status.⁶ Section 3.1 describes how the PPR measure captures differences across these variables. Section 3.2 presents the same type of information jointly for PPB and USFPP, one table for each of the demographic variables.

3.1 Persons-Per-Room (PPR)

As previously explained, our standard for PPR is more than one person-per-room. Figure 8 shows that overcrowding among the Non-Hispanic, White population is relatively low compared to other ethnicities and races. Further, the rate of overcrowding appears stable over time with the share of overcrowded population being the same in 2005 as it was in 1985.

By comparison, overcrowding appears most prevalent among the Hispanic population. The share of Hispanic households considered to be overcrowded has decreased from 13 percent in 1985 to 12 percent in 2005, although the actual number of overcrowded Hispanic households more than doubled over the same period. A rise in overcrowding, both in relative and in absolute terms, is evident among the Hispanic, Black households. In relative terms, the share of overcrowded Hispanic, Black households increased from 5 percent in 1985 to 6 percent in 2005. In comparison, the share of overcrowded Non-Hispanic, Black households was halved in the past 20 years.

⁵ For our analytic purposes, we defined ethnicity and race as being one of four categories – i.e., Hispanic; Hispanic, Black; Non-Hispanic, Black; or Non-Hispanic-White. We did not include in these categories those considered to be American Indian, Asian, Pacific Islander, or those who were of two or more races. Further, we note that the four groupings we used are not mutually exclusive since Hispanic, Black is a subset of Hispanic.

⁶ Note that income data from 1985 have been adjusted for inflation.

Figure 8: Persons-Per-Room, By Ethnicity and Race

Persons-Per-Room	Ethnicity/Race	1985		2005	
		Households	%	Households	%
Less than One	Hispanic	4,272,293	87	9,910,528	88
	Hispanic, Black	161,175	95	379,401	94
	Non-Hispanic, White	70,695,763	99	78,030,766	99
	Non-Hispanic, Black	9,116,707	94	12,707,767	97
One or More	Hispanic	636,562	13	1,339,152	12
	Hispanic, Black	7,626	5	23,727	6
	Non-Hispanic, White	1,047,576	1	698,964	1
	Non-Hispanic, Black	617,068	6	340,683	3

Source: ICF International analysis of AHS data.

Figure 9 provides the distribution of income by persons-per-room. (We inflated the 1985 income data from 1985 dollars to 2005 dollars using the CPI from the U.S. Bureau of Labor Statistics.)

Based on the 1985 and 2005 AHS National data, overcrowding has been reduced over the past 20 years among the populations with the greatest economic need (i.e., households with negative income or without income, and the households earning less than \$25,000/year). However, the data indicate overcrowding increased among the households earning between \$25,000/year and \$100,000/year.

It is interesting to note that there are instances of overcrowding among households earning more than a quarter of a million dollars per year. This finding indicates that for some segment of the population, overcrowding would appear to be a matter of choice rather than a lack of financial means.

Figure 9: Persons-Per-Room, By Income

Persons-Per-Room	Income	1985		2005	
		Households	%	Households	%
Less than One	Negative	109,793	98	45,158	100
	No Income	1,047,224	98	1,597,012	99
	\$1-\$25,000	46,120,648	96	29,187,514	97
	\$25,000-\$50,000	26,316,689	98	27,561,301	97
	\$50,000-\$75,000	8,177,177	99	19,542,492	97
	\$75,000-\$100,000	2,288,477	99	11,770,097	98
	\$100,000-\$250,000	1,866,870	99	14,527,594	99
	Greater than \$250,000	2,199	100	2,048,124	99
One or More	Negative	2,701	2	-	-
	No Income	22,180	2	19,072	1
	\$1-\$25,000	1,684,469	4	795,121	3
	\$25,000-\$50,000	652,030	2	852,988	3
	\$50,000-\$75,000	89,942	1	581,597	3
	\$75,000-\$100,000	26,397	1	189,208	2
	\$100,000-\$250,000	18,441	1	170,462	1
	Greater than \$250,000	-	-	12,907	1

Source: ICF International analysis of AHS data.

The average size of a household considered overcrowded and earning between \$1,000 and \$75,000 per year is 6 to 7 people. For comparison, the average size of a household of comparable means but which is not considered overcrowded is 2 to 3 people.

As can be seen in Figure 10, overcrowding is most prevalent among the households who rent. Based on the published 2005 AHS report, the median size of an owner-occupied home was 1,858 square feet compared to the median size of an occupied, rented home of 1,344 square feet.

Figure 10: Persons-Per-Room, By Tenure

Persons-Per-Room	Tenure	1985		2005	
		Households	%	Households	%
Less than One	Owners	55,165,573	97	73,963,683	99
	Renters	29,252,973	95	30,577,515	95
	No-Cash Rent	2,017,156	96	1,738,093	98
One or More	Owners	979,825	2	986,282	1
	Renters	1,425,487	5	1,603,574	5
	No-Cash Rent	90,847	4	31,499	2

Source: ICF International analysis of AHS data.

When analyzed at the regional level, AHS data indicate that overcrowding is comparatively more prevalent in the Western part of the U.S.

Figure 11: Persons-Per-Room, By Region

Persons-Per-Room	Region	1985		2005	
		Households	%	Households	%
Less than One	Northeast	18,551,808	98	19,957,024	98
	Midwest	21,924,138	98	24,599,096	99
	South	29,477,806	97	38,937,093	98
	West	17,013,748	96	22,786,079	96
One or More	Northeast	410,236	2	418,772	2
	Midwest	444,983	2	355,271	1
	South	971,520	3	784,266	2
	West	669,421	4	1,063,047	4

Source: ICF International analysis of AHS data.

To gain some insight into why the degree of overcrowding differs across geographic regions, we analyzed demographic and economic characteristics of the population living in each of the four regions.

The Hispanic households, which as shown in Figure 8 have the highest rate of overcrowding among households of different ethnicities and races, predominantly live in the West and the South U.S. (40 percent and 36 percent, respectively, based on 2005 AHS National data). In 2005, they accounted for about 22 percent of the total households in the Western U.S. and about 11 percent of the total households in the Southern U.S.⁷

As can be seen in Figure 12, overcrowding is more prevalent in urban areas than in rural. This is likely a function of available space for building residential properties.

Within urban areas, the rate of overcrowding is the highest in central cities. Relative to other urban areas, central cities tend to have a higher concentration of renters, lower income households, and foreign-born population which are more likely to live in overcrowded homes.

⁷ Hispanic households' median income in 2005 was \$35,967 compared to the average income for all households of \$46,326 (Source: U.S. Census Bureau, *Income, Poverty, and Health Insurance Coverage in the United States: 2005*, available at <http://www.census.gov/prod/2006pubs/p60-231.pdf>).

Figure 12: Persons-Per-Room, By Metropolitan Area

Persons-Per-Room	Metropolitan Area	1985		2005	
		Households	%	Households	%
Less than One	Central City of MSA	28,793,419	96	30,484,907	96
	Inside MSA – Urban	28,568,607	98	34,817,035	98
	Inside MSA – Rural	9,945,661	97	14,673,484	99
	Outside MSA – Urban	7,728,635	98	10,106,109	98
	Outside MSA – Rural	11,931,177	98	16,197,757	99
One or More	Central City of MSA	1,095,049	4	1,145,871	4
	Inside MSA – Urban	669,886	2	873,334	2
	Inside MSA – Rural	258,278	3	156,721	1
	Outside MSA – Urban	179,639	2	202,634	2
	Outside MSA – Rural	293,307	2	242,796	1

Note: The Metropolitan Area categories in the 1985 AHS National data did not correspond to the categories in the 2005 AHS National data. We assumed that “Urbanized Suburb” and “Other Urban Suburb” corresponded to the 2005 category of “Inside MSA – Urban.” Similarly, we assumed that “Urbanized Area, Non-Metro” and “Other Urban, Non-Metro” corresponded to the 2005 category of “Outside MSA – Urban.”

Source: ICF International analysis of AHS data.

Figure 13 demonstrates that foreign-born, non-U.S. citizens have the highest share of overcrowded households.⁸ And those who are foreign-born, non-U.S. citizens predominantly live in the West and the South U.S. (52 percent and 28 percent, respectively, based on 2005 AHS National data).

Figure 13: Persons-Per-Room, By Citizenship⁹

Persons-Per-Room	Citizenship Status	2005	
		Households	%
Less than One	Native, Born in U.S.	92,419,256	99
	Native, Born in PR or U.S. outlying area	1,991,101	94
	Native born abroad of U.S. parents	596,900	99
	Foreign born, U.S. citizen by naturalization	5,703,815	95
	Foreign born, not a U.S. citizen	5,568,220	85
One or More	Native, Born in U.S.	1,202,531	1
	Native, Born in PR or U.S. outlying area	137,538	6
	Native born abroad of U.S. parents	7,283	1
	Foreign born, U.S. citizen by naturalization	281,173	5
	Foreign born, not a U.S. citizen	992,831	15

Source: ICF International analysis of AHS data.

⁸ When the analysis is carried out by the person’s citizenship status.

⁹ The 1985 AHS National data does not appear to contain a valid citizenship variable (i.e., CITZ80 is not present as the 1985 AHS Codebook indicates).

3.2 Demographics for Persons-Per-Bedroom (PPB) and Unit Square Footage-Per-Person (USFPP)

In this section we present two alternative measures of overcrowding, PPB and USFPP. These measures are presented jointly for the same set of demographic variables from the AHS National data as were used in the previous section. This streamlined approach was chosen in order to allow an easier comparison across the two measures, especially since the findings tend to be very similar.

The standards we apply to these two measures are the same as were discussed in Section 2. Specifically, we define a standard of two (2) for PPB and 165 square feet for USFPP.

Overall, both PPB and USFPP measures, when applied to the AHS National data, indicate that overcrowding decreased between 1985 and 2005. The same conclusion was reached when PPR measure was used with the AHS national data. Further, the trends in overcrowding among various demographic subgroups measured in terms of PPB and USFPP are generally very similar to the trends in overcrowding measured in terms of PPR.¹⁰

Figure 14 shows that in relative terms (i.e., percentage terms) overcrowding in all four ethnicity/race categories declined for both measures over the past 20 years to 2005. The largest percentage point decline during this period was among the Non-Hispanic, Black population as measured by PPB.

In absolute terms, overcrowding among the Hispanic households rose over the past 20 years, with the number of Hispanic households considered overcrowded doubling between 1985 and 2005. In comparison, the number of overcrowded households declined among the Non-Hispanic population.

Both PPB and USFPP measures indicate that overcrowding is still most prevalent among the foreign-born residents as well as households who rent homes, and/or live in central cities. When analyzed at the regional and income level, the magnitude and the trend in overcrowding differ somewhat depending on whether the PPB or the USFPP measure is used. The PPB measure indicates that overcrowding is most prevalent among the households living in the Western U.S., while the USFPP measure indicates that overcrowding is most prevalent among the households living in the Western and the Northeast U.S. Both measures indicate that the prevalence of overcrowding has decreased among the households earning less than \$50,000/year, while it has stayed constant among the households earning between \$50,000 and \$100,000. The results are different, however, for the households without income. The PPB measure indicates that overcrowding has decreased among those households from 1985 to 2005, while the USFPP measure indicates that the share of overcrowded households without any income has stayed constant during the same period.

¹⁰ The notable exception being income trends.

Figure 14: Overcrowding By Ethnicity and Race

	Ethnicity/Race	PPB				USFPP			
		1985		2005		1985		2005	
		Households	%	Households	%	Households	%	Households	%
Not Overcrowded	Hispanic	4,168,533	85	9,716,134	86	4,434,992	90	10,302,880	92
	Hispanic, Black	150,525	89	372,664	92	158,949	94	382,676	95
	Non-Hispanic, White	70,557,486	98	78,028,965	99	70,611,676	98	77,952,453	99
	Non-Hispanic, Black	9,073,523	93	12,701,049	97	9,251,125	95	12,601,747	97
Overcrowded	Hispanic	740,322	15	1,533,546	14	473,862	10	946,800	8
	Hispanic, Black	18,275	11	30,463	8	9,852	6	20,451	5
	Non-Hispanic, White	1,185,853	2	700,765	1	1,131,663	2	777,277	1
	Non-Hispanic, Black	660,253	7	347,400	3	482,651	5	446,702	3

Source: ICF International analysis of AHS data.

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Figure 15: Overcrowding by Income

	Income	PPB				USFPP			
		1985		2005		1985		2005	
		Households	%	Households	%	Households	%	Households	%
Not Overcrowded	Negative	112,494	100	45,158	100	112,494	100	45,158	100
	No Income	1,036,915	97	1,597,552	99	1,047,784	98	1,581,409	98
	\$1-\$25,000	25,141,537	96	28,984,675	97	25,218,001	96	28,956,720	97
	\$25,000-\$50,000	25,146,667	96	27,492,421	97	25,397,278	97	27,758,345	98
	\$50,000-\$75,000	16,204,729	97	19,592,952	97	16,385,810	98	19,718,356	98
	\$75,000-\$100,000	8,694,083	98	11,752,797	98	8,718,104	99	11,783,916	99
	\$100,000-\$250,000	8,895,620	99	14,529,101	99	8,958,831	99	14,596,543	99
	Greater than \$250,000	362,760	100	2,040,342	99	360,551	99	2,048,771	99
Overcrowded	Negative	-	-	-	-	-	-	-	-
	No Income	32,489	3	18,532	1	21,619	2	34,675	2
	\$1-\$25,000	1,067,374	4	997,960	3	990,910	4	1,025,915	3
	\$25,000-\$50,000	1,003,706	4	921,868	3	753,095	3	655,944	2
	\$50,000-\$75,000	468,019	3	531,136	3	286,939	2	405,733	2
	\$75,000-\$100,000	140,427	2	206,509	2	116,407	1	175,389	1
	\$100,000-\$250,000	118,416	1	168,956	1	55,204	1	101,514	1
	Greater than \$250,000	-	-	20,689	1	2,209	1	12,260	1

Source: ICF International analysis of AHS data.

Figure 16: Overcrowding By Tenure

	Tenure	PPB				USFPP			
		1985		2005		1985		2005	
		Households	%	Households	%	Households	%	Households	%
Not Overcrowded	Owners	55,728,213	98	74,072,123	99	55,863,217	99	74,204,936	99
	Renters	28,881,232	94	30,231,477	94	29,337,972	96	30,565,636	95
	No-Cash Rent	2,023,784	96	1,731,398	98	2,036,087	97	1,718,646	97
Overcrowded	Owners	948,983	2	877,843	1	813,979	1	745,030	1
	Renters	1,797,229	6	1,949,612	6	1,340,488	4	1,615,453	5
	No-Cash Rent	84,219	4	38,194	2	71,916	3	50,947	3

Source: ICF International analysis of AHS data.

Figure 17: Overcrowding By Region

Persons-per-bedroom	Region	PPB				USFPP			
		1985		2005		1985		2005	
		Households	%	Households	%	Households	%	Households	%
Not Overcrowded	Northeast	18,415,453	97	19,831,523	97	18,574,575	98	19,769,362	97
	Midwest	21,859,674	98	24,572,819	98	22,017,651	98	24,624,332	99
	South	29,465,163	97	38,908,763	98	29,522,304	97	39,063,645	98
	West	16,892,940	96	22,721,893	95	17,122,747	97	23,031,879	97
Overcrowded	Northeast	546,591	3	544,273	3	387,468	2	606,434	3
	Midwest	509,447	2	381,547	2	351,470	2	330,035	1
	South	984,164	3	812,596	2	927,023	3	657,714	2
	West	790,230	4	1,127,233	5	560,422	3	817,247	3

Source: ICF International analysis of AHS data.

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Figure 18: Overcrowding By Metropolitan Area

	Metropolitan Area	PPB				USFPP			
		1985		2005		1985		2005	
		Households	%	Households	%	Households	%	Households	%
Not Overcrowded	Central City of MSA	28,492,951	95	30,216,201	96	28,944,438	97	30,496,431	96
	Inside MSA - Urban	28,492,913	97	34,762,308	97	28,688,104	98	34,957,970	98
	Inside MSA - Rural	9,988,775	98	14,684,247	99	9,948,379	97	14,704,132	99
	Outside MSA - Urban	7,745,910	98	10,131,635	98	7,721,519	98	10,105,388	98
	Outside MSA - Rural	11,912,680	97	16,240,607	99	11,934,836	98	16,225,296	99
Overcrowded	Central City of MSA	1,395,518	5	1,414,577	4	944,030	3	1,134,347	4
	Inside MSA - Urban	745,580	3	928,061	3	550,390	2	732,399	2
	Inside MSA - Rural	215,164	2	145,957	1	255,560	3	126,072	1
	Outside MSA - Urban	162,364	2	177,108	2	186,755	2	203,355	2
	Outside MSA - Rural	311,804	3	199,946	1	289,648	2	215,257	1

Source: ICF International analysis of AHS data.

Figure 19: Overcrowding By Citizenship Status¹¹

	Citizenship Status	PPB		USFPP	
		2005		2005	
		Households	%	Households	%
Not Overcrowded	Native, Born in U.S.	92,417,801	99	92,240,676	99
	Native, Born in PR or U.S. outlying area	1,968,946	92	1,986,943	93
	Native born abroad of U.S. parents	587,268	97	594,502	98
	Foreign born, U.S. citizen by naturalization	5,665,337	95	5,771,972	96
	Foreign born, not a U.S. citizen	5,395,645	82	5,895,125	90
Overcrowded	Native, Born in U.S.	1,203,986	1	1,381,111	1
	Native, Born in PR or U.S. outlying area	159,692	8	141,696	7
	Native born abroad of U.S. parents	16,914	3	9,681	2
	Foreign born, U.S. citizen by naturalization	319,651	5	213,015	4
	Foreign born, not a U.S. citizen	1,165,406	18	665,926	10

Source: ICF International analysis of AHS data.

¹¹ The 1985 AHS National data does not contain a valid citizenship variable (i.e., CITZ80 is not present as the 1985 AHS Codebook indicates).

4. Conclusions

There are a variety of measures researchers use to objectively quantify the degree of overcrowding a certain segment of the population has. We found that the most widely used measure is apparently PPR. In our study, we analyzed overcrowding by applying three measures to the AHS National data. The measures we used are: PPR, PPB, and USFPP. We also analyzed overcrowding using a hybrid measure of PPR and USFPP.

At HUD's direction, our report focused on the affected household and did not analyze the effects overcrowded dwellings have on the neighbors. This focus led to the choice of PPR, PPB, and USFPP as measures of overcrowding because they address the amount of interior space available to household members.

Our results demonstrate that over time, the prevalence of overcrowding has decreased. This finding is not surprising. As people's standard of living improved and additional debt-financing instruments became available, more people could afford to buy homes and/or upgrade to larger ones. Further, as home ownership rates increased (and non-ownership rates declined), the average house size increased. Simultaneously, we have seen a decrease in household size over the past 20 years. As a result of all these factors, people now tend to be less crowded in their homes than in years past.

Our findings suggest that although different measures generally produce similar results, the extent of overcrowding among some subpopulations may be under-/over-estimated depending on the measure or standard used.

In Figure 20, we compare the results derived using the PPR and the USFPP measures for six demographic groups. The results indicate that the PPR measure may be overestimating the incidence of overcrowding among the Hispanic households and the households of foreign-born, non-U.S. citizens (the opposite may be said for the USFPP measure).

Figure 20: Comparison of the PPR and the USFPP Measures

	Population segments	2005	
		PPR (%)	USFPP (%)
Not Overcrowded	Hispanics	88	92
	Households with annual income \$1-\$25,000	97	97
	Renters	95	95
	West U.S.	96	97
	Central City of MSA	96	96
	Foreign born, not a U.S. citizen	85	90
Overcrowded	Hispanics	12	8
	Households with annual income \$1-\$25,000	3	3
	Renters	5	5
	West U.S.	4	3
	Central City of MSA	4	4
	Foreign born, not a U.S. citizen	15	10

Source: ICF International analysis of AHS data.

To assess the ‘true’ extent of overcrowding, a multi-vector measure (i.e., one comprised of more than a single measure) could be more appropriate. Such measures would result in a more refined assessment of overcrowding and would minimize instances of false positive outcomes. This is especially important for policymakers when determining how best to allocate limited resources to address overcrowding.

APPENDIX A: Literature Review

This Appendix contains the final literature review we conducted at the start of this task and that was provided to HUD on May 25, 2007. We include this literature review as an appendix to this report for background context and completeness.

Purpose

The Econometrica/ICF team conducted this literature review as a part of Task E: Investigating Overcrowding of the Analytical Support of the American Housing Survey 2006. The review collected articles and case studies from the existing, relevant literature. We also conducted a multi-disciplinary search for additional relevant authors and journals -- e.g., economics, public health, sociology, demography.

The information we collected responded to HUD's most immediate need, identifying plausible research linking housing conditions to medical and social problems. It also provided some guidance in advancing the remaining work on the task, namely, to determine the impacts of overcrowding, determine why overcrowding is important and how best to measure it, and to try to track trends in overcrowding.

Methodology

We began our research using the extensive bibliography of a relevant research paper, "The Impact of homeownership on Child Outcomes" (Haurin, Haurin, Parcel, 1999), web searches of Google and KnowledgePlex, and recommendations of colleagues well-versed in a variety of connected subject matters. Our preliminary research led us to journals ranging from *Child Development* to *Land Economics*. After reviewing the articles in these journals, and finding less than relevant material, we re-focused our search to examine the prevalence of communicable diseases in overcrowded environments and the effects they have on a child's growth and development. We focused primarily on Meningitis, Hepatitis, and Tuberculosis. These were in addition to looking at the effects of second-hand smoke and household hazards, in overcrowded homes, specifically. This shift in focus was fortunate as it led us to a report commissioned by the United Kingdom Office of the Deputy Prime Minister in 2004 that happens to answer all the questions posed in Task E.

"The Impact of Overcrowding on Health and Education: A Review of the Evidence and Literature" was commissioned in late 2003 by the Deputy Prime Minister and uses chiefly primary resources and studies. The report identifies the known impacts of overcrowding on people's health and education, and dispels some common misconceptions on the topic. The analysis is focused on physical and mental health, childhood growth, development and education, in addition to personal safety and accidents. The review contains a bibliography of 97 articles and summarizes the key conclusions of most with respect to the potential relationships or associations of overcrowding.

Copies of this report, *The Impact of Overcrowding on Health and Education: A Review of the Evidence and Literature*, were submitted to HUD in electronic and hard copy forms in late February.

While we did not use the reports found in our initial search, we still feel that they were helpful in that they helped narrow our focus and led us to discover the United Kingdom Office of the Deputy Prime Minister's report.

We searched through many pertinent journals and found that most were not useful. Relevant articles, if only loosely related to overcrowding, are summarized below.

Literature and Case Studies

"The Impact of Home Ownership on Child Outcomes," Donald Haurin, R. Jean Haurin, and Toby Parcel, 1999.

Haurin, Haurin, and Parcel's study, through controlling social, demographic, economic, child-specific, unobserved, and influential factors, finds that owning a home will ultimately lead to a better home environment than what would be achieved when renting a home.

Most notably, their study finds that children of homeowners tend to do six and seven percent better on reading achievement and math achievement, respectively. Additionally, children of homeowners are slightly less (four percent) likely to have behavioral problems. Tangentially, the authors refer to literature that suggests that these differences in achievement and behavior often results in a more promising economic and social future for children of homeowners.

"Patterns of Childhood Residence and the Relationship to Young Adult Outcomes", R. Jean Haurin, 1992.

Focusing on the effects of stability in housing and parenting, Haurin concludes that disruptions in a child's development, specifically divorce or a change to a single-parent household, leads to inconsistency in the raising of the child and often results in economic and social disadvantages. When a divorce happens in a family, the child most often goes to live with the mother.

According to Haurin, the sooner the custody transition, joint or other wise, happens, the better. Multiple moves, changes in schools, friends, role models etc., effects the child's socialization and sense of attachment. Data in Haurin's report supports that children who encounter disruptions of this sort are less likely to complete high school, more likely to have behavioral problems, and even more likely to engage in illegal activity and unwanted pregnancies. While Haurin does not make a point to discuss overcrowding, the report does lay out a clear case as to the effect a well-balanced and nurturing home has on the raising of a child.

“The Relation of Infants’ Home Environments to Achievement Test Performance in First Grade: A Follow-Up Study”, Robert H. Bradley, Bettye M. Caldwell, 1984.

Rather than view the home environment in the sense of neighborhood, space, and amenities, Bradley and Caldwell measure the home environment through the Home Observation for Measurement of the Environment test. This instrument was used to evaluate infants and children 12-24 months old and their families, and included some of the following observations: the emotional and responsiveness of the mother; acceptance of child; organization of the environment; provision of appropriate play materials; material involvement with the child; and variety in daily stimulation. When the child was three years old, a more mature version of the tool was administered measuring the following: toys, games, and reading materials; language stimulation; physical environment; pride, affection, and warmth; stimulation of academic behavior; modeling and encouraging of social maturity; variety of stimulation; and physical punishment.

The children were then given the Mental Development scale at age three and were administered the SRA Achievement Test upon entering first grade. The layers of testing were done to compare the differences amongst the children and the environments in which they were raised.

One of the most notable correlations between the infant testing and the first grade testing is the importance of toys and materials in shaping a child’s cognitive abilities. Bradley and Caldwell make an understated connection to the income of the parents and their ability to provide the appropriate amount of space and toys to cultivate this learning in a child, but there are no conclusions associated to homeownership or overcrowding in the home.

“Home Observation for Measurement of the Environment: Development of a Home Inventory for Use with Families Having Children 6 to 10 Years Old”, Robert H. Bradley, Bettye M. Caldwell, Stephen L. Rock, Holly M Hamrick, and Pandia Harris, 1988.

This study, by Bradley, Caldwell, Rock, Hamrick, and Harris is a continuation of Bradley and Caldwell’s research using the HOME methods for measuring infants to first graders.

Elementary HOME is a 59-item scale evaluating a child’s emotional climate, provision for active stimulation, paternal involvement, among other factors that will give evaluators a clearer picture of the child’s environment. Information derived from this version of HOME may be a useful way to identify risk factors in the home. In this way, the tool will be especially helpful for social workers and school guidance counselors in understanding a child’s behavior or problems in underachievement.

“Measuring the Benefits of Homeowning: Effects on Children”, Richard Green and Michelle White, 1997.

Richard Greene and Michelle White explore the effects homeowning parents have on their children versus parents who are renters. While this paper does not address issues in overcrowding, explicitly, it does touch on the different housing environments that children grow up in and the way that those environments shape their lives physically, emotionally, and behaviorally. Through probit models and bivariate probit techniques, Greene and White conclude that children who grow up in a home, owned by their parents or guardians, have an advantage over those children raised in a rented home. This is based on data suggesting that homeownership is often indicative of a two-parent family which provides stability for raising a family.

A homeowner is also more likely to be invested in their neighborhood and community; ensuring a safe and diverse environment for their family. Renters, on the other hand, are less likely to be as invested in their neighborhood because of the instability and lack of continuity in a renter’s home tenure.

Furthermore, the researchers use the data to conclude that homeowners will often be of a higher level of education and therefore in a higher income bracket than those of renters. Children raised with greater economic resources will have the benefit of superior health care, better education, and more social opportunities than children raised in a poorer home.

“The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out and Teenage Childbearing”, Jonathan Crane, 1991.

Jonathan Crane seeks to defend ghettos by defining them as communities that have an epidemic of social problems. He believes that as such, these communities are a victim of a destructive pattern that has negative effects on the community, especially its youth.

A neighborhood susceptible to crime, gangs, and unemployment creates a negative environment, especially for youth because of impressionability. Crane examines teenagers in this study, and finds that, regardless of race, youth in the worst neighborhoods of the largest U.S. cities, will see a dramatic rise in the number of high drop-outs and teenage childbearing.

“Economic Development and Early Childhood Development”, Greg J. Duncan, Jeanne Brooks-Gunn, Pamela Kato-Klebanov, 1994.

The authors of this study examine the effects of poverty on a child’s development.

A key finding of this report is that the duration of poverty has the most profound effect on a child, and not the timing in early childhood.

In addition, their findings show that income does have a determining factor on a child's cognitive development and behavioral tendencies, as does maternal academic achievement. A mother's level of schooling can have a causal effect on the income of the family, and therefore effect a child's early development.

“When Bigger Is Not Better: Family Size, Parental Resources, and Children's Educational Performance”, Douglas B. Downey, 1995.

The inverse relationship between the number of siblings in a family and the educational performance of a child can be traced back to the available resources the child is exposed to. Downey uses this claim to more acutely investigate the relationship between parent, child, and resources to illustrate why this is so.

“Empirical Evidence on Cross-Tenure Differences in Home Maintenance and Conditions”, George C. Galster, 1983.

Galster sets out to challenge the claim that homeowners occupy a higher-quality dwelling than their renter counterparts.

This study is not based on the initial purchase of the home or of the payments on the rental, but by the maintenance performed to improve or otherwise maintain the quality of the dwelling.

Galster concludes that owner-occupants do generally spend more on the maintenance of their dwelling, but considers other factors as to why this may be so. Primarily, that an owner-occupant has an investment in their dwelling and by maintaining it structurally and aesthetically, they will be more likely to remain in their home.

“Determining Children's Home Environments: the Impact of Maternal Characteristics and Current Occupational and Family Conditions”, Elizabeth G. Menaghan and Toby L. Parcel, 1991.

The past few decades have sparked a wave of research exploring the effect that working mothers have on their children. Menaghan and Parcel focus on the cognitive and socioemotional relationship that a working mother has on the home environment she creates for her child(ren).

They found that maternal characteristics such as age, education, ethnicity, and initial self-esteem and locus of control are critical factors in determining the environment created for the child. By in large, a working mother will be of higher education, have greater self-esteem, and have a greater locus of control, all attributed of someone who is successful in

their job. These same attributes are also large contributors to a home environment that will allow a child to excel academically, socially, and behaviorally.

“Do Neighborhoods Influence Child and Adolescent Development?”, Jeanne Brooks-Gunn, Greg J. Duncan, Pamela Kato-Klebanov, and Naomi Sealand, 1993.

Brooks-Gunn, Duncan, Klebanov, and Sealand prove that neighborhoods have a large influence on the children raised within it. Not surprisingly, children of affluent neighborhoods tend to do better than children raised in low-income neighborhoods.

The authors examined the effect of integrating low-income children into affluent neighborhoods and have found that this has an adverse effect on the child’s development.

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APPENDIX B: Home Size

**Figure B1: Distribution of Square Footage-Per-Person,
Using 2005 AHS National Data**

Square Feet-per-Person	Count of Households	Percent	Cumulative Percent
0 to < 10	2,955	0.00	0.0
10 to < 20	18,270	0.02	0.02
20 to < 30	44,325	0.04	0.07
30 to < 40	48,166	0.05	0.12
40 to < 50	64,655	0.07	0.18
50 to < 60	74,903	0.08	0.26
60 to < 70	46,167	0.05	0.30
70 to < 80	74,519	0.08	0.38
80 to < 90	84,429	0.09	0.46
90 to < 100	141,870	0.14	0.61
100 to < 110	242,772	0.25	0.85
110 to < 120	157,228	0.16	1.01
120 to < 130	282,909	0.29	1.30
130 to < 140	186,580	0.19	1.49
140 to < 150	195,273	0.20	1.68
150 to < 160	521,738	0.53	2.21
160 to < 170	543,320	0.55	2.76
170 to < 180	363,836	0.37	3.13
180 to < 190	452,541	0.46	3.59
190 to < 200	242,799	0.25	3.83
200 to < 210	1,225,484	1.24	5.07
210 to < 220	443,370	0.45	5.52
220 to < 230	817,115	0.83	6.35
230 to < 240	453,328	0.46	6.81
240 to < 250	742,204	0.75	7.56
250 to < 500	23,717,750	23.99	31.55
500 to <600	9,453,932	9.56	41.11
600 to <700	9,535,762	9.65	50.76
700 to <800	7,333,025	7.42	58.18
800 to <900	6,333,041	6.41	64.58
900 to <1,000	5,662,679	5.73	70.31
1,000 to < 1,500	16,025,209	16.21	86.52
1,500 to < 2,000	6,284,055	6.36	92.88
2,000 to < 2,500	2,786,349	2.82	95.70

Measuring Overcrowding in Housing

Square Feet-per-Person	Count of Households	Percent	Cumulative Percent
2,500 to < 3,000	1,459,944	1.48	97.18
3,000 to < 3,500	975,542	0.99	98.16
3,500 to < 4,000	159,697	0.16	98.32
4,000 to < 4,500	83,436	0.08	98.41
Greater than 4,500	1,573,020	1.59	100.00

Source: ICF International analysis of AHS data.



National Center for
Healthy Housing



AMERICAN PUBLIC HEALTH ASSOCIATION
For science. For action. For health.

National Healthy Housing Standard



National Healthy Housing Standard

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Foreword and Acknowledgments

FOREWORD

Housing is one of the best known and documented determinants of health. The affordability, location, and quality of housing have all been independently linked to health. Poor quality housing and blighted neighborhoods diminish property values, increase crime, and erode the cohesiveness and political power of communities. Despite the critical role of housing in public health, attention to U.S. housing conditions remains incommensurate with its importance to our wellbeing. One illustration of this is the number of homes in substandard condition. Despite setting a national goal in Healthy People 2010 to reduce the number of units in substandard condition by 52 percent, we have made no progress. There were 6.3 million units in substandard conditions in 2001; 6.3 million units remain substandard in 2011 according to the most recent American Housing Survey.

More than a century ago, growing concern about the toll of infectious diseases such as tuberculosis, typhoid, and dysentery in America spurred a national public health movement aimed at eradicating inadequate housing conditions. The effort yielded important housing improvements that dramatically curbed the outbreak of communicable diseases. In the decades that followed, the public health community became less involved with housing as separate governmental departments were established to develop and enforce housing and building codes. This separation of public health and housing has challenged the nation's ability to mount a successful campaign to improve the quality of housing and neighborhoods.

We at the National Center for Healthy Housing (NCHH) and the American Public Health Association (APHA) have created this evidence-based National Healthy Housing Standard as a tool to reconnect the housing and public health sectors and as an evidence-based standard of care for those in the position of improving housing conditions. We have drawn from the latest and best thinking in the fields of environmental public health, safety, building science, engineering, and indoor environmental quality.

Our focus in the National Healthy Housing Standard is the over 100 million existing homes in our country that offer the most significant opportunity to protect public health and reduce health disparities. Although new homes are typically safer and healthier, having been built to modern building standards, technologies and regulations, and to ever-changing consumer expectations, the new construction market remains a fraction of the overall housing stock in the country. In contrast, regulations and industry practices affecting existing owner-occupied and rental housing, the focus of this document, have not kept pace with our knowledge about housing-related disease and prevention of disease and injury through routine maintenance.

The consequences of not dealing with substandard housing are dire in both human wellbeing and cost:

- About 20-30 percent of asthma cases are linked to home environmental conditions.
- 21,000 lung cancer deaths result from radon in homes.
- Over 24 million homes that have lead-based paint hazards put children at risk of the irreversible disease of childhood lead poisoning.
- Home injuries are the leading causes of death for young children and put 6 million adults over 65 in hospitals and nursing homes due to preventable falls.

We can do better. We can make our homes smart, at least as smart as our phones. For example, carbon monoxide detectors can alert us to life threatening situations. Modern efficient ventilation systems can keep us comfortable, control humidity, and provide clean fresh air. More resilient homes can handle climate chaos, withstanding storms and wild swings in temperature with proper insulation, air sealing, structural integrity, and moisture control and more. Grab bars, handrails, and ample lighting will help accommodate our aging population. These are the homes in which today's families want to live and grow old and that future generations deserve.

We know that to bring about our vision of ensuring that all people live in safe and healthy homes, we will need to marshal political will and financial resources. Regulations are one important way to address unhealthy housing, but we can also achieve our vision by arming the private sector with the right information. In every community, property

owners, advocates, code officials, public health leaders, and others are positioned to recognize and coordinate their shared missions of keeping people safe and healthy in the places they live. We hope the Standard will inspire action and cross sector collaboration. Most of all, we hope through the implementation of this Standard we will save lives, shrink disparities, and ensure our nation's homes are the safe havens they were meant to be.

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- Sections 302.2, 302.6, 303.2, 303.18.1, 304.2, 305.4, 402.1, 402.2, 403.1, 403.2, 403.5, 404.3, 404.4.3, 505.4, 602.2.2, 602.2.3, 603.2, 603.3 of the 2012 International Property Maintenance Code.
- Section 1210.2 of the 2012 International Building Code.
- Sections 907.2.11.2, 907.2.11.3 of the 2012 International Fire Code.
- Sections 424.3, 424.5, 501.6, 504.4, 504.6 of the 2012 International Plumbing Code.
- Sections E3901, E3902.1, M1901.1, P2713, P2708.3, P3009, R310.1, R310.2, R310.2.1, R311.7.5, R311.7.8, R312.1.1, R312.1.2, R312.1.3, R312.2.1 of the International Residential Code.

USING THIS DOCUMENT

The Standard provides health-based provisions to fill gaps where no property maintenance policy exists and also a complement to the International Property Maintenance Code and other policies already in use by local and state governments and federal agencies for the upkeep of existing homes. The Standard bridges the health and building code communities by putting modern public health information into housing code parlance. The Standard is written in code language to ease its adoption, although we anticipate that states, localities, and other users will tailor it to local conditions.

The Standard consists of seven chapters and a section of definitions. The annotated version of the Standard explains the public health rationale for each provision, and provides references and resources for more information. Individually and together, the Standard constitutes minimum performance standards for a safe and healthy home. In developing the Standard we found a variety of provisions that could be added to further enhance the health and safety of the home, but that would be difficult to achieve during property maintenance due to cost or feasibility. We have included those provisions as “stretch” measures for users who want to go above the minimum requirements or who can integrate compliance with the provisions during property renovation. We encourage the adoption of the stretch provisions wherever feasible.

Requirements and Stretch Provisions

1. DUTIES OF OWNERS AND OCCUPANTS

1.1. Duties of Owners.

The owner has the duty to ensure that the structure, dwelling, dwelling unit, common areas, and premises are maintained in a safe and healthy condition, in compliance with this Standard and other applicable requirements.

1.1.1. The owner shall ensure the collection of trash and recyclables and provide and maintain trash containers, bulk storage containers, recycling containers, and areas where the containers are stored.

1.1.2. The owner shall maintain the building and premises to keep pests from entering the building and dwelling units, inspect and monitor for pests, and eliminate pest infestation in accordance with integrated pest management methods.

1.1.3. The owner shall provide occupants with at least 48 hours written notice of the planned use of a chemical agent such as a pesticide or herbicide, the date and location of application, and a copy of the warning label.

1.1.4. The owner shall not cause or allow any water, sewage, electrical, or gas service, facility, or equipment required for safe and healthy occupancy to be removed, shut off, or discontinued for any occupied dwelling, except for such temporary interruption as may be necessary while repairs or alterations are being performed, or during temporary emergencies requiring discontinuance of service. This provision does not apply where the occupant has contractual control over the service and shall not be interpreted as preventing a utility company from discontinuing service for reasons allowed by law.

1.1.5. The owner shall investigate occupant reports of unsafe or unhealthy conditions, respond in writing, and make needed repairs in a timely manner.

1.2. Duties of Occupants.

The occupant shall properly use and operate the dwelling unit and owner-supplied fixtures and facilities controlled by the occupant in order to maintain a safe and healthy environment within the dwelling unit, and report unsafe or unhealthy conditions, including breakdowns, leaks, and other problems requiring repair to the owner in a timely manner.

1.2.1. The occupant shall place trash and recyclables in the appropriate containers.

1.2.2. The occupant shall work with the owner to ensure pest-free conditions in accordance with integrated pest management.

1.2.3. If the occupant's action leads to pooling of water or another excessive moisture problem inside the dwelling unit, the occupant shall clean up and dry out the area in a timely manner.

2. STRUCTURE, FACILITIES, PLUMBING, AND SPACE REQUIREMENTS

2.1. Structure.

Every foundation, roof, floor, exterior and interior wall, ceiling, inside and outside stair, porch, trim, accessory structure, fence, door, window, and window glass shall be safe to use and capable of supporting the intended design loads and load effects and shall be in good condition.

2.2. Facilities.

Every plumbing fixture and pipe, chimney, flue, smoke pipe, and every other facility, piece of equipment, or utility shall be installed in conformance with applicable statutes, ordinances, and regulations.

2.2.1. Mechanical, utility, and heating equipment shall be separated from habitable rooms. In multifamily buildings, equipment rooms shall be locked.

2.3. Plumbing System.

Every plumbing fixture, stack, vent, water, waste, and sewer pipe shall be properly installed, maintained in a safe and functional order, and kept free from obstructions, leaks, and defects.

2.3.1. An approved potable water supply system shall provide an adequate amount of running water under pressure to all fixtures simultaneously.

2.3.2. An adequate supply of heated running water under pressure shall be supplied to sinks, bathtubs, showers, and laundry facilities. Water heaters shall be set at a minimum temperature of 110° F (43° C). At bathtub faucets and shower heads, the maximum temperature shall be 120° F (49° C). Heated water shall be provided by either a tank-type or tankless water heater. A tank-type water heater shall have a temperature/pressure relief valve that discharges to a drip pan, storage tank, or the outside. The temperature of water discharged from a tankless water heater shall not exceed 140° F (60° C).

2.3.3. Every waste pipe shall be connected to a public sewer system, an approved private sewage disposal system, or the dwelling's graywater system. No toilet waste pipe shall be connected to a graywater system. The drainage system shall have a cleanout.

2.3.4. Faucet discharge points shall be located above the overflow rim of sinks, tubs, or other fixtures that collect water.

✓ **Stretch Provisions:**

- Bathtub and shower faucets shall have anti-scald devices, such as an automatic temperature control mixing valve, water temperature limiting device, or temperature-actuated flow reduction valve.
- Each dwelling unit in multifamily housing shall have a separate meter for water supplied to the unit.
- Multifamily housing with one or more central water heaters shall comply with ASHRAE Standard 188P to assess and manage the risks associated with *Legionella* in building water systems.
- A private water supply shall be tested annually to ensure that water does not have biological or chemical contaminants.
- If there is a suspected risk of excessive lead in drinking water supplied by a public water utility, the water shall be tested. The risk factors shall include, but are not limited to, presence of an occupant with a blood lead level of five micrograms per deciliter or more, pipes made of lead or leaded brass, test results indicating that the lead level in the public water supply exceeds federal limits, and plumbing repair work that has disturbed water supply components (such as faucets, valves, pipes, meters, pressure regulators, backflow preventers, lead-soldered joints, or service lines). If the lead level in the water sample exceeds 15 parts per billion, there shall be an investigation of the possible sources(s) to determine the appropriate course of action. If warranted, lead and brass-containing components shall be replaced.

2.4. Kitchen.

Every dwelling unit shall have a kitchen equipped with the following:

2.4.1. A kitchen sink in good working condition that is properly connected to heated and unheated water supplies and waste pipes. Any provided dishwasher and components of the sink, including disposal and water filtration devices, shall be in good working condition and properly connected.

2.4.2. A counter for food preparation and cabinets and/or shelves sufficient to store occupants' food that does not require refrigeration and eating, drinking, and food preparation equipment. Cabinets shall have tight-fitting doors and no gaps between any surfaces. The counter, countertop edges, cabinets, and shelves shall be of sound construction and furnished with surfaces that are impervious to water, smooth, and cleanable.

2.4.3. A range for cooking food. The range shall be properly installed with all necessary connections for safe and efficient operation and shall be maintained in good working condition.

2.4.3.1. The range shall include an oven unless both a separate oven, other than a microwave oven, and a cooktop are provided. A hot plate is not an acceptable substitute for burners on a range or cooktop. The range or cooktop shall have a vertical clearance of not less than 30 inches (762 mm) from above its surface to unprotected combustible material. Reduced clearances are permitted in accordance with the listing and labeling of the range hood.

2.4.3.2. Ventilation for the range shall be provided in accordance with Subsection 5.3.

2.4.4. A refrigerator with a freezer. The refrigerator shall be in good working condition, of sufficient size to store occupants' food that requires refrigeration, and capable of maintaining a temperature less than 41° F (6° C) but more than 32° F (0° C). The freezer section shall be capable of maintaining a temperature below 0° F (-18° C).

2.4.4.1. If the lease does not provide for a refrigerator, adequate connections for the occupant's installation and operation of a refrigerator shall be provided.

2.4.5. A kitchen floor in good condition with a sealed, water-resistant, nonabsorbent, and cleanable surface.

✓ **Stretch Provisions:**

- Cabinets and countertops shall be constructed of materials that are rated No-Added Formaldehyde (NAF) or Ultra-Low-Emitting Formaldehyde Resins (ULEF).
- Wall surfaces immediately adjacent to the range, sink, and counter shall be covered with an impervious finish.
- The joints where a wall meets a cabinet or counter, and where a counter meets a stove or sink, shall be sealed or covered to permit thorough cleaning and deter pests.
- Enclosed cabinets (as opposed to a combination of shelves and cabinets) sufficient to store occupants' food that does not require refrigeration shall be provided.
- Freestanding stoves shall have brackets to prevent tip-over.

2.5. Bathroom.

Every dwelling unit shall have a private bathroom equipped with the following:

2.5.1. A toilet in good working condition that is sealed to the waste pipe and affixed to the floor and properly connected to both the dwelling's water supply and a waste pipe leading to an approved sewage system or private waste disposal system.

2.5.2. A sink in good working condition, with a stable connection to the wall or secure attachment to the floor that is properly connected to the heated and unheated potable water supply and a sealed trap leading to a waste pipe.

2.5.3. A bathtub or shower in good working condition that is properly connected to the heated and unheated potable water supply and a waste pipe. The bottoms of bathtubs and shower floors shall have permanent or removable nonslip surfaces.

2.5.4. Cleanable nonabsorbent water-resistant material on floor surfaces and extending on bathroom walls at least 48 inches (122 cm) above a bathtub and 72 inches (183 cm) above the floor of a shower stall. Such materials on walls and floors shall form a watertight joint with each other and with the bathtub or shower.

2.5.5. Ventilation for the bathroom provided in accordance with Subsection 5.3.

✓ Stretch Provisions:

- Grab bars shall be firmly anchored to the wall adjacent to each bathtub, shower, and toilet in accordance with the Americans with Disabilities Act Design Guidelines.
- Tub and shower enclosures composed of tile or panel assemblies with caulked joints shall be installed over moisture-resistant backing material, such as cement board. Paper-faced wallboard shall not be used behind such tub and shower enclosures. Monolithic tub and shower enclosures (e.g., fiberglass with no seams) are exempt from these limitations unless required by the manufacturer.

2.6. Minimum Space.

The dwelling shall provide privacy and adequate space for sleeping and living.

2.6.1. A bedroom shall not be the only passageway to the only bathroom in a dwelling unit with more than one bedroom.

2.6.2. A bathroom or toilet room shall not be the only passageway to any habitable room, hall, basement, or the exterior of the dwelling.

2.6.3. Every habitable room shall have a minimum floor area of 70 ft² (6.5 m²).

2.6.4. Every dwelling shall have closet space or other storage space to store occupants' clothing and personal belongings.

2.6.5. The ceiling height of any habitable room shall be at least 84 inches (213 cm). In a habitable room with a sloping ceiling, at least one-half of the floor area shall have a ceiling height of at least 84 inches (213 cm). If any part of a room has a ceiling height lower than 60 inches (152 cm), its floor area shall not be considered in computing the floor area of the room.

2.6.6. A habitable room located partly or totally below grade shall be provided with natural light by windows in accordance with Subsection 4.3, and ventilation in accordance with Subsection 5.3. In such a room, the ceiling and any ducts, pipes, and other obstructions shall be at least 84 inches (213 cm) above the floor throughout the room, and walls and floors shall be waterproof and free of dampness.

2.7. Floors and Floor Coverings.

Floors and floor coverings shall be attached at each threshold, maintained in safe and healthy condition, capable of being cleaned, and free of bulges and buckling. Carpets shall have no tears, folds, or bumps.

✓ Stretch Provisions:

- Floor coverings shall consist of low-pile carpet or nonabsorbent material such as hardwood, tile, or resilient flooring. Carpet and other floor coverings shall be certified as having low volatile organic compound (VOC) emissions, and any adhesives, padding, or other materials used in installing the floor covering shall be certified as having no VOCs or low VOC emissions, and having no perfluorocarbons or halogenated flame retardants.
- Walk-off entry mats shall be provided inside or outside each entryway that leads to the outdoors.

2.8. Noise.

The structure and facilities shall be maintained so that the noise level in the interior of the dwelling unit caused by exterior sources is below 45 dB L_{dn} (day-night equivalent sound level).

✔ **Stretch Provisions:**

- Nighttime noise levels within bedrooms shall not exceed 30 dB LA_{eq} measured over eight hours.
- HVAC equipment, including intermittent ventilation fans, shall operate at a noise level that creates no more than 45 dB L_{dn} in habitable rooms.
- Wall and ceiling assemblies shall meet performance standards to attenuate exterior sound reaching occupants or be constructed using materials with sound-dampening acoustical properties.
- Roof material, chimney baffles, exterior doors, mail slots, attic ventilation ports, wall-mounted air conditioners, and other building components that have the potential to admit excessive noise shall be configured to minimize sound intrusion.
- Windows shall be sealed, made weathertight, and caulked to minimize sound intrusion when closed.

3. SAFETY AND PERSONAL SECURITY

3.1. Egress.

In accordance with local fire codes, every dwelling unit shall have at least two means of egress that serve as emergency escapes and rescue openings. Each egress shall lead outside without passing through another dwelling unit.

3.1.1. Egress routes shall be unobstructed. Doors along egress routes shall be openable from the inside without the use of a key or tool.

3.1.2. Any bedroom located below the fourth floor shall be provided with an exterior window openable from the inside that can be used as a means of emergency egress.

3.1.3. If a habitable room partly or totally below grade is intended for sleeping purposes, at least one exterior window shall be openable from the inside and accessible for easy and ready use as an emergency exit. The window shall have the following minimum dimensions: a net clear opening of 5.7 ft² (0.53 m²); 24 inches (61 cm) from the top of the sill to the bottom of head of the window frame; a width of 20 inches (51 cm); and a sill height of not more than 44 inches (112 cm) from the floor.

3.1.3.1. If the window opening sill height is below ground elevation, the horizontal dimension (width times projection) of the window well shall be at least nine ft² (0.84 m²) and the horizontal projection shall extend at least 36 inches (91 cm) from the exterior side of the window.

3.1.3.2. If the egress window well is deeper than 44 inches (112 cm) below ground elevation, there shall be steps or a ladder permanently attached to serve as an emergency exit to ground elevation. The distance between steps or rungs shall be 18 inches (46 cm), their width shall be at least 12 inches (31 cm), and their projection from the wall shall be between three and six inches (7.6 and 15 cm).

3.1.3.3. A door leading directly from the room to the outside that provides an exit at grade level shall fulfill this requirement.

3.2. Locks/Security.

Means of egress (i.e., windows and/or doors) from dwellings shall have locks.

3.2.1. Following each change in tenancy, the locking devices on the dwelling unit entry doors shall be changed.

3.2.2. Dwelling unit entry doors shall be equipped with a dead bolt lock with a minimum throw of one inch (2.54 cm) and that is capable of being opened from the interior side without a key and a device that permits the occupant to see a person at the entry door without fully opening the door.

3.2.3. Exterior doors on multifamily buildings with a common entry that leads into a foyer or hallway shall have a self-closing mechanism and shall be equipped with a locking device capable of being opened from the interior side without a key.

3.2.4. Exterior windows that are capable of being opened and are potential means of entry shall be equipped with a lock on the interior side.

3.3. Smoke Alarm.

Every dwelling unit shall have a functioning smoke alarm located on the ceiling outside each sleeping area in the immediate vicinity of the bedrooms, in each additional room used for sleeping purposes, and on every level except crawlspaces and uninhabitable attics. In dwellings or dwelling units with split levels that have no door between adjacent levels, the smoke alarm installed on the upper level shall suffice for the adjacent lower level. In the event a smoke alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.3.1. In multifamily housing, a tamper-proof smoke detection system (interconnected with a central fire alarm system) or stand-alone smoke alarms in good working condition shall be installed on each level including basements, in heating system and storage rooms, in garages, and in other common areas.

3.3.2. Battery-operated smoke alarms and the battery backup for hardwired smoke alarms shall be powered with long-lasting batteries.

3.3.3. Alternative visual notification shall be provided for hearing-impaired occupants.

✔ **Stretch Provisions:**

- Smoke alarms shall be hardwired with battery backup.
- Smoke alarm batteries shall be sealed-in and tamper-proof.
- Multiple smoke detection stations shall be interconnected.
- Every dwelling unit shall have both a photoelectric smoke alarm and an ionization smoke alarm.

3.4. Fire Extinguisher.

Fire extinguishers shall be rated Class ABC and shall be readily accessible.

3.4.1. Each dwelling unit shall have at least one 10-pound fire extinguisher in good working condition in or near the kitchen.

3.4.2. In multifamily housing, there shall be fire extinguishers in common areas on each floor and in areas where flammable or combustible liquids are stored, used, or dispensed. The fire extinguishers shall be located in conspicuous, unobstructed locations that are not obscured from view.

✔ **Stretch Provision:**

- The dwelling shall have an automatic fire sprinkler system that complies with the applicable locally adopted fire code. If the local fire code has no sprinkler requirement or if no local fire code exists, the installed automatic fire sprinkler system shall comply with either the International Fire Code® or the National Fire Protection Association Standard 1.

3.5. Carbon Monoxide Alarm.

Every dwelling unit shall have at least one functioning carbon monoxide (CO) alarm on every habitable floor and outside each separate sleeping area, in the immediate vicinity of every bedroom. In the event a CO alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.5.1. Battery-operated CO alarms shall be powered with long-lasting batteries. Hardwired CO alarms shall have long-lasting battery backup.

3.5.2. Alternative visual notification shall be provided for hearing-impaired occupants.

✔ **Stretch Provisions:**

- CO alarms and combination smoke/CO alarms shall include voice notification.
- If a combination ionization sensor smoke/CO alarm is used, a second smoke alarm utilizing photoelectric smoke sensors shall be installed.
- CO alarm batteries shall be sealed-in and tamper-proof.
- CO present at or above 30 ppm (35 mg/m³) when measured over one hour, or above nine ppm (10.5 mg/m³) measured over eight hours, shall be deemed hazardous. The cause of a hazardous indoor CO level shall be investigated to identify and eliminate its source.

3.6. Walking Surfaces.

Every interior and exterior stairway, ramp, deck, porch, and balcony shall be maintained structurally sound, in good repair, properly anchored, and capable of supporting the imposed loads.

3.6.1. Treads on exterior stairways shall have nonskid surfaces.

3.6.2. Every interior and exterior stairway with four or more risers shall have at least one structurally sound continuous handrail installed not less than 34 inches (86.7 cm) and not more than 38 inches (96.5 cm), measured vertically from above the nose of the tread. The handrail shall be firmly fastened, capable of supporting a load of 300 pounds, and in good condition. If a side of a stairway is open to the floor or grade below, and the handrail provides the guard required by Subsection 3.7, the rail shall be supported by balusters 34 to 38 inches (86.7 to 96.5 cm) in height, measured vertically from the nose of the tread.

✓ Stretch Provisions:

- Every interior and exterior stairway shall have uniform risers and treads. Risers shall be no higher than 7¾ inches (19.6 cm) and treads shall be at least 10 inches (25.4 cm) deep, unless the existing space and construction do not allow a reduction in pitch or slope.
- Interior and exterior stairways shall have handrails on both sides. Railings shall have a graspable perimeter measuring four to six inches (10–16 cm), and if noncircular in shape, shall have no sharp corners and a width no smaller than five-eighths inch (1.5 cm).

3.7. Guards.

3.7.1. Every stairway, porch, patio, landing, and/or balcony located more than 30 inches (76.2 cm) above an adjacent area shall have a structurally sound guard between 30 inches (76.2 cm) and 42 inches (107 cm) high, measured vertically from the floor. The guard shall be firmly fastened, capable of supporting normally imposed loads, capable of being opened in case of emergency, and in good condition. Balusters with a minimum thickness of one-half inch (13 mm) shall be placed at intervals that do not allow passage of a sphere greater than four (10.2 cm) inches in diameter. There shall be no climbable cross pieces. If the balusters do not reach the floor, the narrowest opening between the bottom of the stair guard and the floor shall be a maximum of four inches (10.2 cm).

3.7.2. If the vertical distance from the top of the sill of an exterior window opening to the finished grade or other surface below is greater than 72 inches (183 cm), and the vertical distance from the top of the sill to the floor of the room is less than 36 inches (91.5 cm), the window shall have a fall prevention device compliant with ASTM F2006 or ASTM F2090.

3.7.2.1. The fall prevention device for a window that provides access to a fire escape or is otherwise designated for emergency egress shall be compliant with ASTM F2090.

3.8. Chemical Storage.

3.8.1. Each dwelling unit shall have a cabinet or other storage space that is lockable or not readily accessible to children for the storage of medicine and household chemical agents.

3.8.2. Storage space for flammable and combustible liquids shall be available either in a building separate from the dwelling's habitable space or in an adjacent space that is not connected to the dwelling's ventilation system.

3.9. Pools, Hot Tubs, and Other Water Features.

3.9.1. Swimming pools, hot tubs, spas (except a residential spa or hot tub with a safety cover complying with ASTM F 1346-91), ornamental ponds, and other water features that hold water more than 24 inches (61 cm) in depth shall be completely surrounded by a fence or barrier at least 48 inches (122 cm) in height above the finished ground level that is accessible only through a self-closing and self-latching gate. The gate's latch shall be located 54 inches (137 cm) above the bottom of the gate on the interior side of the gate facing the water feature. The fence and gate shall not have climbable crosspieces.

3.9.2. All pools and spas shall have anti-entrapment drain covers compliant with ANSI/ASME A112.19.8, ANSI/APSP 16-2011, or any successor standard, on every suction outlet.

3.9.3. Pool drains and drain covers shall be clearly visible and in good repair. Where there is a single main drain (other than an unblockable drain), a second anti-entrapment system shall be installed.

3.9.4. Luminaries, receptacles, and other outlets shall have ground fault circuit interrupter (GFCI) protection.

4. LIGHTING AND ELECTRICAL SYSTEMS

4.1. Electrical System.

Every dwelling unit shall have electric service, outlets, and fixtures that are grounded and installed properly, maintained in good and safe working condition, and connected to a source of electric power.

4.1.1. Every dwelling unit shall be supplied with a three-wire, 120/240-volt, single-phase electrical service that is not shared with another dwelling unit.

4.1.2. Temporary wiring or extension cords shall not be used as permanent wiring.

✔ **Stretch Provision:**

- The electrical service shall have a rating of not less than 100 amperes.

4.2. Outlets.

Every habitable room shall have at least two separate and remote grounded duplex electric receptacle outlets.

4.2.1. Each kitchen and each room containing a toilet, sink, bathtub, or shower stall shall have at least one grounded duplex electric receptacle outlet protected by a ground-fault circuit interrupter (GFCI).

4.2.2. Receptacle outlets in garages, crawl spaces, unfinished basements, and outdoors shall be protected by GFCIs.

✔ **Stretch Provisions:**

- Habitable rooms shall have sufficient electric receptacle outlets so that no location on a wall is more than six feet from an outlet.
- Every countertop space 12 inches (305 mm) or wider shall have a grounded duplex electric convenience receptacle outlet protected by a GFCI. No section of counter shall be more than 24 inches (610 mm) measured horizontally from an outlet.
- Receptacle outlets in habitable rooms that are not protected by GFCIs shall be protected by arc-fault circuit interrupters (AFCIs).

4.3. Natural Lighting.

Every habitable room shall receive daylight from at least one exterior window or skylight.

4.3.1. If a habitable room receives daylight from an adjacent room or area used seasonally, such as a porch, the daylight through this interconnection shall be available year-round.

4.3.2. Every bathroom and kitchen shall comply with the daylight requirement for habitable rooms contained in this section, unless the room is equipped with a ventilation system consistent with Subsection 5.3.

4.4. Artificial Lighting.

Each room containing a toilet, sink, bathtub, or shower stall shall contain at least one ceiling- or wall-type electric lighting fixture. Each non-habitable room, including laundry rooms, furnace rooms, and public halls, shall contain at least one ceiling- or wall-type electric lighting fixture.

4.4.1. Light switches that control ceiling- or wall-type electric light fixtures shall be located conveniently for safe use.

4.4.2. Every public hall, exterior entry door, and stairway in multifamily housing shall be illuminated at all times by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area. The distance between light fixtures shall not be greater than 30 feet (762 cm).

4.4.3. In a building containing one or two dwelling units, every public hall, exterior entry door, and stairway shall be illuminated by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area that is controlled by a three-way switch or a motion-activated device.

✔ Stretch Provisions:

- Polychlorinated-biphenyl (PCB)-containing lighting ballasts (e.g., older pre-1978 T-12 lighting ballasts) shall be removed, replaced with lighting fixtures that do not contain PCBs, and disposed of in accordance with applicable state and federal regulations.
- The lighting fixtures in public halls, stairways, and entries shall provide 1600 lumens for every 200 ft² (18.6 m²) of floor area.
- The parking areas and walkways of multifamily housing shall be illuminated by outdoor lighting devices suitable for the premises.

5. THERMAL COMFORT, VENTILATION, AND ENERGY EFFICIENCY

5.1. Heating, Ventilation, and Air Conditioning Systems.

Facilities for heating, cooling, ventilation, and humidity control shall be maintained in good working condition and operated when necessary for the health and comfort of the occupants and in accordance with the design capacity of the installed equipment. Within 48 hours after equipment has become inoperative due to a mechanical problem or power failure other than a utility outage, an alternative safe source of necessary heating, ventilating, or cooling shall be provided.

5.2. Heating System.

Except in Climate Zone 1, every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms, and toilet rooms. The heating system, filtration components, distribution components, heating elements, and cooling elements (if provided), shall be sealed, cleaned, maintained, and operated in accordance with manufacturer specifications and shall be inspected and serviced annually by a licensed heating, ventilation, and air conditioning systems contractor.

5.2.1. Venting and Air Supply for Heating Equipment. Furnaces, water heaters, wood stoves, and other devices that employ combustion-burning fuel shall be vented to the outside of the structure in an approved manner that meets manufacturer specifications and is in compliance with applicable codes and standards (e.g., ANSI 223.1/NFPA 54 National Fuel Gas Code, NFPA 31 Standard for the Installation of Oil-Burning Equipment, NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) and shall be supplied with sufficient air to support the continuous complete combustion of fuel and prevent backdrafting.

5.2.2. Minimum Heat Temperature. The heating system shall be capable of maintaining a minimum room temperature of 68° F (20° C) in every habitable room, bathroom, and toilet room.

5.2.3. Heating Supply. If the dwelling unit is rented, leased, or let on terms either expressed or implied that heat will be supplied, heat shall be provided to maintain a minimum temperature of 68° F (20° C) in habitable rooms, bathrooms, and toilet rooms; and at no time during the heating season shall the system allow the temperature to exceed 78° F (25° C) in any room.

5.2.4. Forced-Air Systems. Any dwelling with a forced-air system shall have at least one thermostat within each dwelling unit capable of controlling the heating system, and cooling system if provided, to maintain temperature set point between 55° F (13° C) and 85° F (29° C) at different times of the day. The system shall have a clean air filter installed in accordance with manufacturer specifications at each change in tenancy and at least annually. This filter shall have a minimum efficiency reporting value of eight (MERV-8) unless the system is not equipped to use a MERV-8 filter.

5.2.5. Steam and Hot Water Systems. In dwellings with heating equipment utilizing steam or hot water with a temperature of 110° F (43° C) or greater, protective covers/barriers shall be installed on and maintained for exposed surfaces of baseboard units, radiators, and piping between radiators.

5.2.6. Wood Stoves. A wood stove manufactured after June, 1988 shall have a manufacturer's label certifying compliance with the emission standard at 40 C.F.R. § 60 part AAA. Clearance of 30 inches (76 cm) shall be maintained between combustible materials and a stove with no heat shield. Where a heat shield is present, the clearance between combustible materials and the stove shall be compliant with manufacturer specification for the heat shield.

✓ **Stretch Provisions:**

- Any new combustion heating equipment installed in occupied or conditioned spaces shall be power-vented or sealed (direct-vented) combustion equipment.
- The heating system shall be controlled by a programmable thermostat to avoid temperature extremes.

- The dwelling shall have provisions to maintain the indoor temperature below a maximum of 85° F (29° C) through the use of mechanical air conditioning, ventilation systems, or passive design features.
- Air filters shall be replaced at least every three months.

5.3. Ventilation.

Natural or mechanical ventilation, or a combination of the two, shall deliver fresh air to every habitable room and bathroom and be capable of removing moisture-laden air and other contaminants generated during cooking, bathing, and showering.

5.3.1. Every dwelling shall have a ventilation system compliant with ASHRAE Standard 62.2 (Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings) or ASHRAE 62.1 (Ventilation for Acceptable Indoor Air Quality) as applicable to the dwelling.

5.3.2. The air exhausted from a bathroom, toilet room, kitchen, clothes dryer, or basement shall not be vented into any other parts of the building's habitable space or an attic; such air shall discharge directly to the outdoors but not near any intake on the building exterior.

5.3.2.1. The exhaust vent from a clothes dryer shall consist of a rigid or corrugated semi-rigid metal duct.

5.3.3. Pipes, ducts, conductors, fans, and blowers shall not discharge gases, steam, vapor, hot air, grease, smoke, odors, or other gaseous or particulate wastes directly upon abutting or adjacent public or private property or that of another occupant. Vent pipe openings and any pest-proofing screens that cover them shall be maintained free of debris.

5.3.4. Basement air shall not be used as supply air for an air handling system.

✓ **Stretch Provision:**

- HVAC equipment shall have the capacity to maintain indoor relative humidity (RH) at or below 60 percent.

5.4. Air Sealing.

Openings into dwellings and dwelling units shall be sealed to limit uncontrolled air movement.

5.4.1. Exterior doors, windows and skylights, openings where siding and chimneys meet, utility penetrations, electrical outlets, and other openings shall be weathertight.

5.4.1.1. Pads, door sweeps, weather stripping, and seals shall be used and maintained to minimize air leaks.

5.4.2. Openings separating an attached garage from a habitable room, including doors, ceilings, floors, and utility and ductwork penetrations, shall be sealed.

5.4.2.1. Any doorway between a habitable room and a garage shall be equipped with a wood door not less than 1 $\frac{3}{8}$ inches (35 mm) in thickness, a solid or honeycomb core steel door not less than 1 $\frac{3}{8}$ inches (35 mm) thick, or a 20-minute fire-rated door. The door shall have an automatic closing mechanism and be sealed with weather stripping.

5.4.2.2. There shall be no door, window, or other opening from a garage into a room used for sleeping purposes.

5.4.3. Heating and air conditioning system ductwork and air handling units located in an attached garage shall be correctly insulated and sealed.

5.4.3.1. There shall be no supply or return vent openings in a garage that connect to air handlers serving habitable spaces.

5.4.4. In a multifamily building, walls, ceilings, and floors that separate a dwelling unit from neighboring units, corridors, chases, stairwells, and other openings shall be sealed.

✔ **Stretch Provision:**

- Air handling equipment and associated ductwork shall be relocated from a garage to an area within the conditioned space.

6. MOISTURE CONTROL, SOLID WASTE, AND PEST MANAGEMENT

6.1. Moisture Prevention and Control.

Every foundation, roof, roofing component, exterior wall, door, skylight, and window shall be watertight, weathertight, free of persistent dampness or moisture, and in good condition.

6.1.1. The building's drainage system, such as footing or foundation drains, gutters, downspouts, rainwater collection containers, or other elements, shall direct water away from the structure.

6.1.2. Exterior wood surfaces shall be protected from the elements and decay by paint or other protective treatment. Weep holes in brickwork shall be left open.

6.1.3. Premises shall be graded and maintained to prevent the erosion of soil and to prevent the accumulation of water on the premises, within a crawlspace, or within the structure.

6.1.4. Interior and exterior surfaces and surface coverings, such as but not limited to carpet, wood, cellulose insulation, and paper, paint, and other wall coverings, including paper-faced gypsum board, shall have no signs of visible mold growth or chronic or persistent excessive dampness or moisture.

6.1.5. Building material that is discolored or deteriorated by mold or mildew or causes a moldy or earthy odor shall be cleaned, dried, and repaired. Structurally unsound material shall be removed and replaced.

6.1.5.1. Removal and repair of moldy material shall be conducted in accordance with New York City's *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*, the Institute of Inspection, Cleaning, and Restoration Certification's *IICRC S520 Standard and Reference Guide for Professional Mold Remediation*, or the EPA guidelines for *Mold Remediation in Schools and Commercial Buildings*.

6.1.6. The underlying cause of excessive dampness or moisture, or moldy or earthy odor shall be investigated and corrected.

6.1.7. Cold HVAC and plumbing components and systems (e.g., chilled-water pipes and valves, refrigerant piping, and valves) in readily accessible locations shall be sufficiently and continuously insulated to keep the temperature of their surfaces at least 10° F (4° C) above the dew point of the surrounding air.

6.1.8. Unless the crawl space is sealed and insulated from the outdoors, the crawl space shall be free of high-moisture conditions or be separated from the dwelling by an air seal or other method suitable to the climate and conditions.

✔ **Stretch Provisions:**

- Exterior weather-resistant barrier systems shall be used to reduce potential for water leaks and moisture intrusion.
- Water/mold-resistant materials shall be used on bathroom walls and floors, showers, and other areas of the home that are likely to be exposed to moisture.
- In warm-humid and mixed-humid climates:
 - Exterior wall insulations shall not include a vapor barrier/retarder material on the interior side (such as plastic sheeting or foil facing), with the exception of closed-cell foam insulation (spray or rigid), kraft-faced insulation, and seasonally adjusting membranes.
 - There shall be no vinyl wallpaper or other impermeable interior finish on the interior surface of exterior walls within an air-conditioned dwelling.
 - Exterior drainable rigid insulation systems shall be used to reduce wall assembly condensation risk.
- The building and its systems shall meet the following moisture management criteria:
 - When the building is being mechanically cooled, ventilation air shall be dried to a dew point value below the building's dew point.
 - Condensation inside HVAC components and air distribution ductwork shall be drained to an appropriate sanitary drain or condensate collection system.

- Indoor surfaces of both occupied and unoccupied spaces shall not be cooled to temperatures so low as to create an average surface relative humidity (RH) of over 80 percent that lasts for more than 30 days on visible surfaces in occupied spaces and surfaces inside building cavities and unconditioned space.
- Indoor dew point shall be low enough to ensure no condensation occurs on the exposed surfaces of cool HVAC components or on building materials or furnishings.
- Humidifiers shall be sized, installed, and controlled so they do not overload the air with humidity, which increases the risk of condensation inside air distribution systems and exterior walls and roofing assemblies.

6.2. Solid Waste.

Every dwelling shall have adequate facilities for temporary storage of trash and recyclable materials.

6.2.1. There shall be trash containers outside the dwelling for the storage of trash awaiting collection or disposal. The total capacity of these facilities shall be sufficient to store occupants' trash between scheduled collection times, and shall be placed on a cleanable surface constructed to minimize spillage.

6.2.2. There shall be containers outside the dwelling for recyclable materials awaiting collection, with capacity sufficient to store occupants' recyclable materials between scheduled collection times.

✔ Stretch Provision:

- Exterior trash and recycling containers shall be placed at least 30 feet (nine meters) from the building, unless such space is not available.

6.3. Pest Management.

Integrated pest management (IPM) methods shall be used to maintain every dwelling free of infestation, openings that allow pest entry, conditions that harbor pests or provide them with food or water, and visible pest residue or debris.

6.3.1. A pest management professional who has an IPM certification or a person trained in IPM shall develop the IPM program for a multifamily building.

6.3.2. Every dwelling, premise, accessory structure, and fence shall be maintained in good repair, free of pest infestation, and inspected for pests and building conditions that attract and support pests.

6.3.2.1. There shall be no accumulation of trash, paper, boxes, lumber, scrap metal, food, or other materials that support rodent harborage in or about any dwelling or premises. Stored materials shall be placed in boxes or stacked in stable piles elevated at least six inches (152 mm) above the ground or floor and at least six inches (152 mm) from the walls. Stored materials shall not block any egress routes.

6.3.2.2. There shall be no trees, shrubs, or other plantings in the soil within six inches (152 mm) of any dwelling.

6.3.2.3. There shall be no accumulation of water in or about any dwelling or premises.

6.3.3. Every openable window and storm door shall be supplied with adequate screens to prevent the entry of pests.

6.3.4. There shall be no holes or open joints in exterior walls, foundations, slabs, floors, or roofs that equal or exceed one-eighth inch (3 mm).

6.3.4.1. The areas surrounding windows, doors, pipes, drains, wires, conduits, vents, and other openings that penetrate exterior walls shall be sealed with low-VOC caulk or closed-cell insulation.

6.3.5. Pest infestation and the underlying cause shall be eliminated using control methods consistent with IPM, such as exclusion, sanitation, and least-risk pesticides scaled to and designed for the targeted infestation.

6.3.5.1. Foggers and organic phosphates shall not be used to control or eliminate pests.

7. CHEMICAL AND RADIOLOGICAL AGENTS

7.1. General Requirements.

All chemical and radiological agents in dwellings, premises, and accessory structures, including but not limited to deteriorated lead-based paint, friable asbestos-containing material, formaldehyde, volatile organic compounds, radon, pesticides, and methamphetamine, shall be contained, stored, removed, or mitigated in a safe and healthy manner consistent with federal, state, and local laws and regulations. When an applicable regulatory limit is more protective than the level included in this section, the more restrictive limit shall apply.

7.2. Lead-Based Paint.

7.2.1. Lead levels at or above federal regulatory limits pursuant to 40 C.F.R. § 745.65 are deemed hazardous: (1) lead-based paint on an existing painted surface—0.5 percent by weight or 1.0 milligrams per square centimeter; (2) dust on floors—40 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—250 $\mu\text{g}/\text{ft}^2$; (4) dust on window troughs (wells)—400 $\mu\text{g}/\text{ft}^2$; (5) bare soil in children’s play areas—400 parts per million (ppm) of lead; and (6) bare soil in areas of the yard that are not children’s play areas—1,200 ppm.

7.2.2. Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of 40 C.F.R. § 745 Subpart E, and the underlying cause of the deterioration shall be corrected.

7.2.3. All renovation, repair, and painting work that disturbs a painted surface in a pre-1978 dwelling shall be performed in accordance with the renovation requirements of 40 C.F.R. § 745, Subpart E, unless the paint has been tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a). Dust clearance testing shall be performed at the conclusion of renovation work.

7.2.4. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), a painted surface shall not be disturbed using methods that involve (1) open-flame burning or torching or operating a heat gun at temperatures above a maximum of 1,100° F (593° C); or (2) power sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and a High-Efficiency Particulate Air (HEPA) vacuum attachment that collects dust and debris at the point of generation. The shroud or containment system shall release no visible dust or air outside the shroud or containment system.

7.2.5. Lead-based paint shall not be applied to the interior or exterior surface of any dwelling or dwelling unit.

✓ **Stretch Provision:**

- Lead present at or above the following limits is deemed hazardous: (1) lead-based paint on a friction, impact, or chewable surface, damaged or otherwise deteriorated, or non-intact—0.06 percent by weight; (2) dust on floors—10 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—100 $\mu\text{g}/\text{ft}^2$; and (4) 40 $\mu\text{g}/\text{ft}^2$ on porches.

7.3. Asbestos.

Every owner shall maintain in good repair all asbestos-containing material on the premises. All asbestos-containing material shall be maintained non-friable and free from any defects such as holes, cracks, tears, and/or looseness that may allow the release of fibers into the environment.

7.3.1. Friable asbestos-containing material shall be abated by licensed asbestos professionals in accordance with federal, state, or local requirements.

7.3.2. Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

7.3.3. Abatement, removal, and disposal of all asbestos-containing material shall comply with all appropriate federal, state, and local requirements.

7.4. Toxic Substances in Manufactured Building Materials.

7.4.1. Building materials consisting of hardwood plywood, medium-density fiberboard, and particleboard as defined by 15 U.S.C. 2697(b)(2) shall not be used in maintenance and renovations within dwellings, unless the materials have been certified to meet the formaldehyde emission standards of 15 U.S.C. 2697(b)(2):

- (1) Hardwood plywood with a veneer core, 0.05 parts per million (ppm);
- (2) Hardwood plywood with a composite core, 0.05 ppm;
- (3) Medium-density fiberboard, 0.11 ppm;
- (4) Thin medium-density fiberboard, 0.13 ppm; and
- (5) Particleboard, 0.09 ppm.

7.4.2. Building materials used in maintenance and renovations, including but not limited to paints, coatings, primers, glues, resins, adhesives, and floor coverings, shall be certified as having no volatile organic chemicals (VOCs) or low VOC emissions, and having no halogenated flame retardants (HFRs).

7.5. Radon.

Radon present at levels at or above the EPA action level of four picocuries radon per liter of air (pCi/L) in the lowest habitable level of the dwelling shall be deemed hazardous. Radon levels shall be determined by an approved testing method in accordance with state and local requirements. Radon levels exceeding four pCi/L shall be mitigated by a qualified radon mitigation professional who meets state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

✔ **Stretch Provision:**

- Radon present at levels at or above two pCi/L in the lowest habitable level of the dwelling shall be deemed hazardous. Radon determined by an approved testing method to exceed two pCi/L shall be mitigated by qualified radon mitigation professionals in accordance with state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

7.6. Pesticides.

Pesticides shall only be used in accordance with IPM methods discussed in Section 6.3, using the least toxic pesticide with demonstrated efficacy for the identified pest.

7.6.1. Pesticides shall be applied only in areas and at concentrations which comply with manufacturer specifications. When it is determined by an approved method that a hazardous amount of a pesticide has been applied in a location or at a concentration contrary to manufacturer specifications, the hazard shall be immediately mitigated.

7.6.2. Pesticides shall be stored and disposed in accordance with manufacturer specifications.

7.7. Methamphetamine.

A dwelling that has been used for methamphetamine manufacture shall be vacated until certified by an approved testing method as safe from hazardous materials related to the methamphetamine manufacturing process.

7.8. Smoke in Multifamily Housing.

7.8.1. Smoking shall be prohibited in all indoor common areas of multifamily buildings.

7.8.2. Smoking shall be prohibited in exterior areas less than 25 feet (762 cm) from building entrances, outdoor air intakes, and operable windows.

7.8.3. Tenants and prospective tenants shall be informed in writing of any applicable smoke-free policy and the location of designated smoke-free and smoking areas. Signs shall be posted in all designated areas.

7.8.4. Tenants who terminate a lease early due to incursion of tobacco smoke or the inception of a smoke-free policy shall be exempt from early termination penalties or security deposit forfeiture.

 **Stretch Provisions:**

- A property-wide policy shall be established in consultation with current tenants to designate exterior common areas where smoking shall be prohibited and areas where smoking shall be permitted.
- A property-wide policy shall be established in consultation with current tenants to designate dwelling units where tobacco smoking shall be prohibited.

Definitions

Accessory structure shall mean a detached structure, such as garage or shed, that is subordinate to the principal building(s) on the same premises.

Adequate shall mean sufficient to accomplish the purpose intended without unreasonable risk to human health or safety.

Approved shall mean established by the local or state authority having such administrative authority or determined by the designated official.

Asbestos shall mean chrysotile, amosite, crocidolite; or, in fibrous form, tremolite asbestos, anthophyllite asbestos, or actinolite asbestos.

Asbestos-containing material shall mean any material or product containing more than one percent asbestos.

Backdrafting shall mean improper venting of combustion appliances that causes combustion by-products or other gases to enter the indoor environment rather than to exhaust outdoors.

Balusters shall mean pillars or columns in a series supporting a rail or guard.

Basement shall mean a portion of a building located partly or entirely below grade.

Biological agent shall mean but not be limited to mold, infestation, human and animal waste, wastewater, sewage, rotting material, and accumulation of trash that may harbor viruses, parasites, fungi, and/or bacteria.

Bulk storage container shall mean a metal trash container that is more than 40 inches (102 cm) in height, has a capacity of more than two cubic yards (1.5 m³), and is equipped with fittings for hydraulic and/or mechanical emptying, unloading, and/or removal.

Carbon monoxide alarm shall mean an electronic device that measures the level of carbon monoxide gas in the air and is equipped with a sensor that activates an audible alarm when an amount of carbon monoxide above the device's threshold level accumulates in the area in which the alarm is located.

Chemical agent shall mean chemicals that have the potential to cause adverse health effects.

Chimney shall mean a vertical masonry shaft of reinforced concrete or other approved noncombustible, heat-resisting material enclosing one or more flues, to remove products of combustion from solid, liquid, or gaseous fuel.

Class ABC fire extinguisher shall mean a fire extinguisher capable of putting out (1) fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics (Class A); (2) fires in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases (Class B); and (3) fires that involve energized electrical equipment (Class C).

Cleanable shall mean moisture-resistant, free from cracks, pitting, chips, or tears, and designed to be cleaned frequently.

Climate Zone 1 shall mean the geographic region designated by the International Energy Conservation Code that receives each year at least 5,000 cooling degree days, which are calculated by multiplying temperature differences above 50 degrees Fahrenheit by the amount of time such higher temperatures are reached.

Common areas shall mean areas within multifamily housing that are designated for use by all occupants, owners, tenants, or users of a building or building complex, including but not limited to corridors, hallways, lobbies, parking areas, laundry rooms, recreational spaces, pools, and exterior property.

Dwelling shall mean any building wholly or partly used or intended to be used for living, sleeping, cooking, and eating.

Dwelling unit shall mean a room or group of rooms used or intended to be used for living, sleeping, cooking, and eating by one or more individuals living together as a single household.

Egress shall mean the path available for a person to leave a building. This route shall be unobstructed, and doors along this route cannot be subject to locking from the side to which people will be leaving.

Electrical system shall mean a system that makes electricity available in a building and distributes it through outlets and lighting fixtures for occupant use.

Emergency escape and rescue opening shall mean an operable window, door, or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

Flue shall mean a conduit made of non-combustible heat-resisting material that is used to remove the products of combustion from solid, liquid, or gaseous fuel.

Formaldehyde shall mean the colorless, flammable carcinogenic chemical, an organic compound with the formula HCHO, which is used in the manufacture of building materials (e.g., pressed wood products) and household products. Federal limits for formaldehyde emissions from building materials (hardwood plywood, medium-density fiberboard, and particleboard) were established in 15 U.S.C. 2697(b) (2).

Friable shall mean asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

Grade shall mean the finished ground level adjoining building at all exterior walls.

Graywater system shall mean a system for collecting household waste water from plumbing fixtures other than toilets and treating it for non-potable reuse.

Guard shall mean a building component or a system of building components located near the open sides of elevated walking surfaces or adjacent to a window that minimizes the possibility of a fall from the walking surface or window to the lower level.

Habitable room shall mean an enclosed floor space used or intended to be used for living, sleeping, cooking, or eating, and excluding bathrooms, toilet rooms, laundries, furnace rooms, pantries, kitchenettes, utility rooms, foyers, communicating corridors, stairways, closets, storage spaces, workshops, or rooms with less than 70 ft² (6.5 m²) of floor space.

Handrail shall mean a horizontal or sloping rail intended for grasping by the hand for guidance or support.

Harborage shall mean any conditions or place where pests can obtain water or food, nest, or obtain shelter.

Healthy: See "safe and healthy."

Heating system shall mean facilities that, for the purpose of maintaining thermal comfort during cold weather, heat air or water through a furnace or heat pump and distribute such heat through vents, ducts, pipes, or radiators, or hardwired electrical heaters. Neither a cooking appliance nor a portable, unvented fuel-burning space heater is a heating system.

Infestation shall mean the recurrent presence of any life stages of a pest that presents a hazard to humans, property, or the environment.

Insects shall mean all species of classes of Arachnida and Insecta (Hexapoda) of the phylum Arthropoda and includes but is not limited to flies, mosquitoes, bed bugs, crickets, cockroaches, moths, bees, wasps, hornets, fleas, lice, beetles, weevils, gnats, ants, termites, mites, ticks, spiders, and scorpions.

Integrated pest management shall mean a systematic strategy for managing pests that consists of prevention, exclusion, monitoring, and suppression of pests. Where chemical pesticides are necessary, a preference is given to materials and methods that maximize safety and reduce environmental health risk. Methods to manage pests include eliminating their harborage places; removing or making inaccessible their food and water sources; routine inspection and monitoring; identification of evidence found; treatment that is scaled to and designed for the infestation; using the least-toxic pesticide for the identified pest; and follow-up inspection until the infestation is gone. Low-toxicity pesticide products are labeled with the signal word of CAUTION while WARNING, DANGER, and POISON indicate higher levels of toxins.

L_{dn} (day-night equivalent sound level) shall mean a weighted average sound level measured over a 24-hour period with adjustments anticipating reduced levels during evening and night hours to factor occupants' extra sensitivity to noise during those time periods.

LA_{eq} shall mean an average sound level measured over a specified period.

Lead-based paint shall mean equal to or greater than 1.0 milligram lead per square centimeter or 0.5 percent lead by weight for existing surfaces, paint, or other surface coatings, and equal to or greater than 90 parts per million (ppm) or .009 percent lead for paint and other surface coatings at the point of purchase.

Lead-based paint hazard shall mean any deteriorated lead-based paint, dust-lead hazard, soil-lead hazard, lead-based paint present on chewable surfaces with teeth marks, or lead-based paint present on friction surfaces, in accordance with 40 C.F.R. § 745.65.

Let shall mean to lease or grant the use and possession of real property whether or not for compensation.

Long-lasting battery shall mean a battery having a life of ten or more years.

Methamphetamine shall mean the synthetic drug with more rapid and lasting effects than amphetamine, sometimes used or manufactured illegally as a stimulant.

Mixed-humid climate shall mean a region that receives more than 20 inches (50 cm) of annual precipitation, has approximately 5,400 heating degree days (65° F or 18° C basis) or fewer, and where the average monthly outdoor temperature drops below 45° F (7° C) during the winter months. The U.S. counties located in a warm-humid climate are identified by Building America.

Mold shall mean a growth that a fungus produces on damp or decaying organic matter or on living organisms.

Multifamily housing shall mean any dwelling containing more than two dwelling units.

Occupant shall mean any individual living, sleeping, cooking, or eating in and having possession of a dwelling or dwelling unit.

Owner shall mean any person who alone, jointly, or severally with others, has legal title to the premises, dwelling, or dwelling unit, with or without accompanying actual possession thereof; has charge, care, or control of any premises, dwelling, or dwelling unit, as owner, agent of the owner, or other person; is executor, administrator, trustee, or guardian of the estate of the owner; is a mortgagee in possession; or is the senior officer or trustee of the association of unit owners of a condominium.

Person shall mean any individual, firm, corporation and its officers, association, partnership, cooperative, trustee, executor of an estate, governmental agency, or any other legal entity recognized by law.

Pesticide shall mean any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant.

Pests shall mean insects, rodents, or other vermin.

Plumbing shall mean and include any and all of the following facilities and equipment: water pipes, garbage disposal units, waste pipes, toilets, sinks, bathtubs, shower baths, catch basins, drains, vents, installed clothes washing machines and dishwashers, and any other supplied plumbing fixtures, together with all connections to water, sewer, or gas lines.

Potable water shall mean water that complies with the maximum contaminant limits of the United States Environmental Protection Agency (EPA) or a regulatory limit that is more protective than EPA's.

Premises shall mean a lot or parcel of land or plot of land, either occupied or unoccupied by any dwelling, and includes any such building, accessory structure, or other structure thereon.

Privacy shall mean the existence of conditions that permit an individual or individuals to be without observation, interruption, or interference by unwanted individuals.

Properly connected shall mean installed in accordance with all applicable codes and ordinances, and in good working order and not constituting a hazard to life or health.

Radon shall mean the odorless, tasteless, and invisible gas found in both outdoor air and indoor air that is a form of ionizing radiation produced by the decay of uranium in soil and water.

Recyclable materials shall mean disposable products composed of glass, metal, paper, plastic, and similar content that can be processed to produce a new supply of the same material or be reused in the production of other materials.

Riser shall mean the vertical surface that connects one tread of a step or stair to the next.

Rodent shall mean any member of the order Rodentia, including but not limited to field and wood mice, wood rats, squirrels, woodchucks, gophers, Norway rats (*Rattus norvegicus*), roof rats (*Rattus rattus*), and house mice (*Mus musculus*).

Safe and healthy shall mean the condition of being free from danger and chemical, biological, and physical agents that may cause injury, disease, or death; and fit for human occupancy.

Smoke shall mean emissions from a lighted pipe, cigar, cigarette, hookah, weed, herbs, or any other lighted biomass-burning substances such as but not limited to tobacco, marijuana, and incense.

Smoke detector shall mean a device that is equipped to activate an audible alarm when it detects the presence of combustion products in air.

Space heater shall mean a self-contained convection or radiant heater designed to heat a room, two adjoining rooms, or some other limited space or area.

Supplied shall mean paid for, furnished by, provided by, or under the control of the owner or operator.

Toilet room shall mean a room containing a water closet or urinal but not necessarily a bathtub or shower.

Trash shall mean garbage, refuse, or ashes.

Trash container shall mean a container with a tight-fitting lid that is constructed of metal or other durable material that is impervious to rodents, insects, and handling stress; and is capable of being filled, emptied, and cleaned without creating unsanitary conditions.

Tread shall mean the horizontal surface of a step or stair.

Unblockable drain shall mean a pool, spa, or whirlpool drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

Ventilation system shall mean the natural or mechanical process of supplying or removing conditioned or unconditioned air to or from a space.

Volatile organic compounds, or VOCs, shall mean organic chemical compounds whose composition makes it possible for them to evaporate under normal indoor atmospheric conditions of temperature and pressure.

Walk-off mat shall mean a coarse-ribbed or plush-surfaced mat with nonslip backing placed inside or just outside building entrances designed to capture dirt, water, and other materials tracked inside by people and equipment.

Warm-humid climate shall mean the region where either of the following conditions occurs: (1) 67° F (19.4° C) or higher wet bulb temperature for 3,000 or more hours during the warmest six consecutive months of the year; or (2) 73° F (22.8° C) or higher wet bulb temperature for 1,500 or more hours during

the warmest six consecutive months of the year. The U.S. counties located in a warm-humid climate are identified in Figure 301.1 and Table 301.1 of the 2012 International Energy Conservation Code.

Waterproof shall mean impervious to water.

Watertight shall mean closely sealed, fastened, or fitted so that no water enters or passes through the surface.

Weathertight shall mean secure against penetration by air, wind, rain, snow, and other weather conditions.

Interpretation of Terms:

Where the words "dwelling," "dwelling unit," "premises," and "structure," or a particular building component are used in this Standard, they shall be construed as if they were followed by the words "or any part thereof." Words used in the singular include the plural, and the plural the singular.

Annotated Standard: Requirements and Stretch Provisions with Rationales, References, and Resources

1. DUTIES OF OWNERS AND OCCUPANTS

1.1. Duties of Owners.

The owner has the duty to ensure that the structure, dwelling, dwelling unit, common areas, and premises are maintained in a safe and healthy condition, in compliance with this Standard and other applicable requirements.

1.1.1. The owner shall ensure the collection of trash and recyclables and provide and maintain trash containers, bulk storage containers, recycling containers, and areas where the containers are stored.

1.1.2. The owner shall maintain the building and premises to keep pests from entering the building and dwelling units, inspect and monitor for pests, and eliminate pest infestation in accordance with integrated pest management methods.

1.1.3. The owner shall provide occupants with at least 48 hours written notice of the planned use of a chemical agent such as a pesticide or herbicide, the date and location of application, and a copy of the warning label.

1.1.4. The owner shall not cause or allow any water, sewage, electrical, or gas service, facility, or equipment required for safe and healthy occupancy to be removed, shut off, or discontinued for any occupied dwelling, except for such temporary interruption as may be necessary while repairs or alterations are being performed, or during temporary emergencies requiring discontinuance of service. This provision does not apply where the occupant has contractual control over the service and shall not be interpreted as preventing a utility company from discontinuing service for reasons allowed by law.

1.1.5. The owner shall investigate occupant reports of unsafe or unhealthy conditions, respond in writing, and make needed repairs in a timely manner.

1.2. Duties of Occupants.

The occupant shall properly use and operate the dwelling unit and owner-supplied fixtures and facilities controlled by the occupant in order to maintain a safe and healthy environment within the dwelling unit, and report unsafe or unhealthy conditions, including breakdowns, leaks, and other problems requiring repair to the owner in a timely manner.

1.2.1. The occupant shall place trash and recyclables in the appropriate containers.

1.2.2. The occupant shall work with the owner to ensure pest-free conditions in accordance with integrated pest management.

1.2.3. If the occupant's action leads to pooling of water or another excessive moisture problem inside the dwelling unit, the occupant shall clean up and dry out the area in a timely manner.

2. STRUCTURE, FACILITIES, PLUMBING, AND SPACE REQUIREMENTS

2.1. Structure.

Requirement:

Every foundation, roof, floor, exterior and interior wall, ceiling, inside and outside stair, porch, trim, accessory structure, fence, door, window, and window glass shall be safe to use and capable of supporting the intended design loads and load effects and shall be in good condition.

Rationale:

The structure of a dwelling is complex. Its different parts must all be adequately designed and properly maintained to ensure that the habitable space is safe and healthy. The structure of a dwelling is dependent on foundation and footing, vapor barriers, house framing, roof framing, roofs, exterior walls, and trim components that are maintained in good condition. Poor construction of the structure can result in several negative consequences, including dampness or condensation; poor energy efficiency; excessive noise; structural damage, such as cracks in walls, open joints, and loose roofs, which allows pest intrusion; and collapse of building components, such as fixtures, flooring, lighting and cabinets, which can lead to poor health, injuries, or even death. Structural deficiencies in a dwelling can cause falls, fires, burns and scalds, carbon monoxide and other poisoning, drowning, and other injuries.

References:

- Jacobs, D. E. & Baeder, A. (2009). *Housing interventions and health: A review of the evidence*. Columbia, MD: National Center for Healthy Housing. Retrieved from <http://www.nchh.org/LinkClick.aspx?fileticket=2lvaEDNBldU%3d&tabid=229>
- U.S. Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. (2006). *Healthy housing reference manual*. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.2. Facilities.

Requirement:

Every plumbing fixture and pipe, chimney, flue, smoke pipe, and every other facility, piece of equipment, or utility shall be installed in conformance with applicable statutes, ordinances, and regulations.

2.2.1. Mechanical, utility, and heating equipment shall be separated from habitable rooms. In multifamily buildings, equipment rooms shall be locked.

Rationale:

Housing facilities in disrepair are likely to cause health burdens as a result of plumbing leaks and chimney, flue, and smoke pipe malfunctions. Chimneys in poor condition can cause condensation buildup within the chimney, which can lead to deterioration and eventually chimney collapse. Additionally, carbon monoxide and other combustion-related hazards that leak through gaps and cracks can cause lasting damage to a resident's health. Fire outbreaks can also start in chimneys and lead to serious injuries or death.

References:

Chimney Safety Institute of America. (2013). Safe home heating—avoiding carbon monoxide hazards. http://www.csia.org/homeowner-resources/Avoiding_Carbon_Monoxide_Hazards.aspx

2.3. Plumbing System.

Requirement:

Every plumbing fixture, stack, vent, water, waste, and sewer pipe shall be properly installed, maintained in a safe and functional order, and kept free from obstructions, leaks, and defects.

2.3.1. An approved potable water supply system shall provide an adequate amount of running water under pressure to all fixtures simultaneously.

2.3.2. An adequate supply of heated running water under pressure shall be supplied to sinks, bathtubs, showers, and laundry facilities. Water heaters shall be set at a minimum temperature of 110° F (43° C). At bathtub faucets and shower heads, the maximum temperature shall be 120° F (49° C). Heated water shall be provided by either a tank-type or tankless water heater. A tank-type water heater shall have a temperature/pressure relief valve that discharges to a drip pan, storage tank, or the outside. The temperature of water discharged from a tankless water heater shall not exceed 140° F (60° C).

2.3.3. Every waste pipe shall be connected to a public sewer system, an approved private sewage disposal system, or the dwelling's graywater system. No toilet waste pipe shall be connected to a graywater system. The drainage system shall have a cleanout.

2.3.4. Faucet discharge points shall be located above the overflow rim of sinks, tubs, or other fixtures that collect water.

✓ Stretch Provisions:

- Bathtub and shower faucets shall have anti-scald devices, such as an automatic temperature control mixing valve, water temperature limiting device, or temperature-actuated flow reduction valve.
- Each dwelling unit in multifamily housing shall have a separate meter for water supplied to the unit.
- Multifamily housing with one or more central water heaters shall comply with ASHRAE Standard 188P to assess and manage the risks associated with *Legionella* in building water systems.
- A private water supply shall be tested annually to ensure that water does not have biological or chemical contaminants.
- If there is a suspected risk of excessive lead in drinking water supplied by a public water utility, the water shall be tested. The risk factors shall include, but are not limited to, presence of an occupant with a blood lead level of five micrograms per deciliter or more, pipes made of lead or leaded brass, test results indicating that the lead level in the public water supply exceeds federal limits, and plumbing repair work that has disturbed water supply components (such as faucets, valves, pipes, meters, pressure regulators, backflow preventers, lead-soldered joints, or service lines). If the lead level in the water sample exceeds 15 parts per billion, there shall be an investigation of the possible sources(s) to determine the appropriate course of action. If warranted, lead and brass-containing components shall be replaced.

Rationale:

Plumbing leaks may cause mold growth on building materials. People who are exposed to molds may experience nasal and eye irritation, respiratory and allergic diseases, and asthma exacerbation. Damp conditions may magnify levels of biological agents, such as dust mites, bacteria, and cockroaches. The containment of household sewage is instrumental in protecting the public from waterborne and vector-borne diseases. Water at 140° F (60° C) can result in a second-degree burn after three seconds and a third-degree burn after five seconds. The long-term effects of scalds can include disability, disfigurement, or psychological harm and repeated skin grafts. Exposure to hazards in drinking water must be averted to prevent lead poisoning, *Legionella*, and other diseases caused by waterborne biological and chemical agents.

References:

- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2011). *Standard 188P (draft): Prevention of Legionellosis associated with building water systems*. Retrieved from <https://osr.ashrae.org/Public%20Review%20Draft%20Standards%20Lib/Std-188P-PPR2%20Final%206%2010%202011.pdf>
- Burge, H. A. (1990, November). Bioaerosols: Prevalence and health effects in the indoor environment. *Journal of Allergy and Clinical Immunology*, 86(5), 687-704. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/2229836>
- Institute of Medicine. (2004). *Damp indoor spaces and health*. Washington, DC: The National Academies Press. Available at <http://www.iom.edu/Reports/2004/Damp-Indoor-Spaces-and-Health.aspx>
- International Code Council. (2012). *International plumbing code*, §§ 424.3, 424.5.

- International Code Council. (2012). *International property maintenance code*. §§ 505.4, 504.4-6. 501.6.
- International Code Council. (2012). *International residential code*, §§ P2713, P 2708.3, P 3009.
- U.S. Centers for Disease Control and Prevention. (2013, August). Drinking water. Retrieved from <http://www.cdc.gov/healthywater/drinking/index.html>
- U.S. Environmental Protection Agency. (2009, May). National primary drinking water regulations. Retrieved from <http://water.epa.gov/drink/contaminants/index.cfm>
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- World Health Organization. (2010). *Technical and policy recommendations to reduce health risks due to dampness and mould*. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0015/121425/E92998.pdf

Resources:

- American Society of Sanitary Engineering International. (n.d.). www.asse-plumbing.org/standards
- Connecticut Department of Public Health. (2013). *Private drinking water in Connecticut*. Retrieved from http://www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/24_residential_drinking_water_well_testing.pdf

2.4. Kitchen.

Requirement:

Every dwelling unit shall have a kitchen equipped with the following:

2.4.1. A kitchen sink in good working condition that is properly connected to heated and unheated water supplies and waste pipes. Any provided dishwasher and components of the sink, including disposal and water filtration devices, shall be in good working condition and properly connected.

2.4.2. A counter for food preparation and cabinets and/or shelves sufficient to store occupants' food that does not require refrigeration and eating, drinking, and food preparation equipment. Cabinets shall have tight-fitting doors and no gaps between any surfaces. The counter, countertop edges, cabinets, and shelves shall be of sound construction and furnished with surfaces that are impervious to water, smooth, and cleanable.

2.4.3. A range for cooking food. The range shall be properly installed with all necessary connections for safe and efficient operation and shall be maintained in good working condition.

2.4.3.1. The range shall include an oven unless both a separate oven, other than a microwave oven, and a cooktop are provided. A hot plate is not an acceptable substitute for burners on a range or cooktop. The range or cooktop shall have a vertical clearance of not less than 30 inches (762 mm) from above its surface to unprotected combustible material. Reduced clearances are permitted in accordance with the listing and labeling of the range hood.

2.4.3.2. Ventilation for the range shall be provided in accordance with Subsection 5.3.

2.4.4. A refrigerator with a freezer. The refrigerator shall be in good working condition, of sufficient size to store occupants' food that requires refrigeration, and capable of maintaining a temperature less than 41° F (6° C) but more than 32° F (0° C). The freezer section shall be capable of maintaining a temperature below 0° F (-18° C).

2.4.4.1 If the lease does not provide for a refrigerator, adequate connections for the occupant's installation and operation of a refrigerator shall be provided.

2.4.5. A kitchen floor in good condition with a sealed, water-resistant, nonabsorbent, and cleanable surface.

✓ Stretch Provisions:

- Cabinets and countertops shall be constructed of materials that are rated No-Added Formaldehyde (NAF) or Ultra-Low-Emitting Formaldehyde Resins (ULEF).

- Wall surfaces immediately adjacent to the range, sink, and counter shall be covered with an impervious finish.
- The joints where a wall meets a cabinet or counter, and where a counter meets a stove or sink, shall be sealed or covered to permit thorough cleaning and deter pests.
- Enclosed cabinets (as opposed to a combination of shelves and cabinets) sufficient to store occupants' food that does not require refrigeration shall be provided.
- Freestanding stoves shall have brackets to prevent tip-over.

Rationale:

Properly designed kitchens enable the safe and hygienic preparation and cooking of food and reduce the risk of food poisoning. Damp, unmaintained surfaces may deteriorate, causing increased chance of growth of biological agents, presenting a risk of food contamination and food poisoning. Kitchen floors that are impervious to water and capable of being cleaned and maintained prevent the accumulation of dirt, moisture, and biological agents.

References:

- California Air Resources Board. (n.d.). No-added formaldehyde and ultra low emitting formaldehyde resins. http://www.arb.ca.gov/toxics/compwood/naf_ulef/naf_ulef.htm
- International Code Council. (2012). *International residential code*, § M1901.1.
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.5. Bathroom.

Requirement:

Every dwelling unit shall have a private bathroom equipped with the following:

2.5.1. A toilet in good working condition that is sealed to the waste pipe and affixed to the floor and properly connected to both the dwelling's water supply and a waste pipe leading to an approved sewage system or private waste disposal system.

2.5.2. A sink in good working condition, with a stable connection to the wall or secure attachment to the floor that is properly connected to the heated and unheated potable water supply and a sealed trap leading to a waste pipe.

2.5.3. A bathtub or shower in good working condition that is properly connected to the heated and unheated potable water supply and a waste pipe. The bottoms of bathtubs and shower floors shall have permanent or removable nonslip surfaces.

2.5.4. Cleanable nonabsorbent water-resistant material on floor surfaces and extending on bathroom walls at least 48 inches (122 cm) above a bathtub and 72 inches (183 cm) above the floor of a shower stall. Such materials on walls and floors shall form a watertight joint with each other and with the bathtub or shower.

2.5.5. Ventilation for the bathroom provided in accordance with Subsection 5.3.

✔ Stretch Provisions:

- Grab bars shall be firmly anchored to the wall adjacent to each bathtub, shower, and toilet in accordance with the Americans with Disabilities Act Design Guidelines.
- Tub and shower enclosures composed of tile or panel assemblies with caulked joints shall be installed over moisture-resistant backing material, such as cement board. Paper-faced wallboard shall not be used behind such tub and shower enclosures. Monolithic tub and shower enclosures (e.g., fiberglass with no seams) are exempt from these limitations unless required by the manufacturer.

Rationale:

Poorly maintained bathrooms can cause water damage, mold growth, and associated health issues. Exposure to bathroom-related biological agents can cause respiratory and gastrointestinal symptoms. People who are exposed

to molds may experience nasal and eye irritation, respiratory and allergic diseases, and asthma exacerbation. Structural deficiencies in the bathroom, such as the lack of grab bars and nonslip surfaces, may lead to falls, especially among young children and older adults. Children under the age of five years are most likely to fall in the bathroom, but older adults experience greater injuries. The most common injuries resulting from falls associated with a bath, shower, or similar facility are cuts or lacerations, swelling or bruising, or fractures. Outcomes from a bathroom fall are likely to be more severe than in other areas, because of the many hard projections and surfaces found in bathrooms and the fact that the user may be unprotected by clothing.

References:

- Cutbill, M. (1982). *Analysis of accidents located in the bathroom*. London, U.K.: Department of Trade and Industry. As cited in U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- DiGiuseppi, C., Jacobs, D. E., Phelan, K. J., Mickalide, A. D., & Ormandy, D. (2010, September). Housing interventions and control of injury-related structural deficiencies: A review of the evidence. *Journal of Public Health Management Practice*, S32–S41.
- International Code Council. (2012). *International building code*, § 1210.2.
- NYC Mayor’s Office for People with Disabilities. (2010, September). *Inclusive design guidelines*. Available at: <http://shop.iccsafe.org/inclusive-design-guidelines-new-york-city-1.html>
- U.S. Department of Justice. (2010). *Americans with Disabilities Act standards for accessible design*. § 609. Retrieved from <http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#Bars>
- World Health Organization. (2010). *Technical and policy recommendations to reduce health risks due to dampness and mould*. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0015/121425/E92998.pdf
- World Health Organization. (2009). *WHO guidelines for indoor air quality: Dampness and mould*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0017/43325/E92645.pdf

2.6. Minimum Space.

Requirement:

The dwelling shall provide privacy and adequate space for sleeping and living.

2.6.1. A bedroom shall not be the only passageway to the only bathroom in a dwelling unit with more than one bedroom.

2.6.2. A bathroom or toilet room shall not be the only passageway to any habitable room, hall, basement, or the exterior of the dwelling.

2.6.3. Every habitable room shall have a minimum floor area of 70 ft² (6.5 m²).

2.6.4. Every dwelling shall have closet space or other storage space to store occupants’ clothing and personal belongings.

2.6.5. The ceiling height of any habitable room shall be at least 84 inches (213 cm). In a habitable room with a sloping ceiling, at least one-half of the floor area shall have a ceiling height of at least 84 inches (213 cm). If any part of a room has a ceiling height lower than 60 inches (152 cm), its floor area shall not be considered when computing the floor area of the room.

2.6.6. A habitable room located partly or totally below grade shall be provided with natural light by windows in accordance with Subsection 4.3, and ventilation in accordance with Subsection 5.3. In such a room, the ceiling and any ducts, pipes, and other obstructions shall be at least 84 inches (213 cm) above the floor throughout the room, and walls and floors shall be waterproof and free of dampness.

Rationale:

Privacy is a necessity to people, to some degree and during some periods. There should be sufficient space to provide for social interaction between members of the household, while allowing for private time away from other household members. Personal space and privacy needs are important for the individual members of the same household as well as for individuals or households sharing rooms and/or facilities. Providing adequate enclosed floor space for living, sleeping, cooking, or eating and storage helps prevent clutter and provides privacy to promote healthy living. Pest harborage, psychological distress, and injury hazards may result from clutter. Where units with rooms meeting the minimum floor area requirement are unavailable or unaffordable, it may be necessary to deviate from minimum room size.

References:

- Housing Corporation and Care Service Improvement Partnership. (2006). *Good housing and good health?* Retrieved from http://www.healthimpactproject.org/resources/document/Good_housing_and_good_health.pdf
- International Code Council. (2012). *International property maintenance code*, §§ 404.4.3, 404.3.
- MidWest Plan Service. (2006). *The house handbook: Guidelines for building or remodeling your home*. Ames, IA: Iowa State University.
- Office of the Deputy Prime Minister. (2004, May). *The impact of overcrowding on health & education: A review of the evidence and literature*. London: Office of the Deputy Prime Minister. Retrieved from <http://dera.ioe.ac.uk/5073/>
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

2.7. Floors and Floor Coverings.

Requirement:

Floors and floor coverings shall be attached at each threshold, maintained in safe and healthy condition, capable of being cleaned, and free of bulges and buckling. Carpets shall have no tears, folds, or bumps.

✓ Stretch Provisions:

- Floor coverings shall consist of low-pile carpet or nonabsorbent material such as hardwood, tile, or resilient flooring. Carpet and other floor coverings shall be certified as having low volatile organic compound (VOC) emissions, and any adhesives, padding, or other materials used in installing the floor covering shall be certified as having no VOCs or low VOC emissions, and having no perfluorocarbons or halogenated flame retardants.
- Walk-off entry mats shall be provided inside or outside each entryway that leads to the outdoors.

Rationale:

Worn carpet that is poorly maintained can pose slip, trip, and fall hazards. Carpet in poor condition may also be a source of chemical and biological agents that become lodged in the carpeting. Worn carpeting is difficult to vacuum adequately. Cleanable floors in good condition are less likely to accumulate dirt, moisture, and chemical and biological agents. Volatile organic compounds (VOCs) contribute significantly to unhealthy indoor air quality. VOC sources are not limited to the flooring itself, but also include glues, padding, and other materials used in installation. Perfluorocarbons (PFCs), which are linked to a range of developmental disorders and other adverse effects, were added to carpets for stain resistance until U.S. manufacturers voluntarily discontinued their use in 2006.

References:

- California Department of Public Health. (2010). *Emission testing method for California specification 01350: Standard method for the testing and evaluation of volatile organic chemical emissions from indoor sources using environmental chamber*. Retrieved from http://standards.nsf.org/apps/group_public/download.php/19152/CDPH%2001350%20V1-1.pdf
- Carpet and Rug Institute. (n.d.). Residential: Green label/green label plus. Retrieved from <http://www.carpet-rug.org/residentialcustomers/selecting-the-right-carpet-or-rug/green-label.cfm>

- Environmental Working Group. (2003). PFCs last forever. Retrieved from <http://www.ewg.org/research/pfcs-global-contaminants/pfcs-last-forever>
- Lewis, R. D., Breyse, P. N., Lees, P. S. J., Diener-West, M., Hamilton, R. G., & Eggleston, P. (1998, September). Factors affecting the retention of dust mite allergen on carpet. *American Industrial Hygiene Association Journal*, 59(9), 606–613. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9778820>
- National Center for Healthy Housing. (2008). *Carpets and healthy homes*. Retrieved from <http://www.nchh.org/Portals/0/Contents/CarpetsHealthyHomes.pdf>
- Scientific Certification System. (n.d.). *FloorScore*®. Retrieved from <http://www.scsglobalservices.com/floorscore>
- U.S. Environmental Protection Agency. (2013, September). *Significant new uses: Perfluoroalkyl sulfonates and long-chain perfluoroalkyl carboxylate chemical substances*. Retrieved from <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPPT-2012-0268-0034>

2.8. Noise.

Requirement:

The structure and facilities shall be maintained so that the noise level in the interior of the dwelling unit caused by exterior sources is below 45 dB L_{dn} (day-night equivalent sound level).

✓ Stretch Provisions:

- Nighttime noise levels within bedrooms shall not exceed 30 dB LA_{eq} measured over eight hours.
- HVAC equipment, including intermittent ventilation fans, shall operate at a noise level that creates no more than 45 dB L_{dn} in habitable rooms.
- Wall and ceiling assemblies shall meet performance standards to attenuate exterior sound reaching occupants or be constructed using materials with sound-dampening acoustical properties.
- Roof material, chimney baffles, exterior doors, mail slots, attic ventilation ports, wall-mounted air conditioners, and other building components that have the potential to admit excessive noise shall be configured to minimize sound intrusion.
- Windows shall be sealed, made weathertight, and caulked to minimize sound intrusion when closed.

Rationale:

The World Health Organization (WHO) has identified and documented seven categories of adverse health effects of noise pollution on humans: hearing impairment, speech intelligibility, disturbances in sleep and cardiovascular function; mental health, negative social behavior and annoyance reactions, and impaired task performance. The negative health impacts of noise are related to the total noise exposure experienced from all noise sources in the environment and can lead to a combination of these different negative impacts. Additionally, noise exposure disproportionately impacts certain segments of the population. Infants, children, those with mental or physical illnesses, and the elderly are particularly vulnerable to noise pollution.

References:

- Berglund, B., Lindvall, T., & Schwela, D. (1999). *Guidelines for community noise*. Geneva: World Health Organization. Retrieved from who.int/docstore/peh/noise/guidelines2.html
- Hagler, L. (1999). *Summary of adverse health effects of noise pollution*. Retrieved from <http://www.noiseoff.org/document/who.summary.pdf>
- Harris, D. A. (1997). *Noise control manual for residential buildings*. New York, NY: McGraw-Hill Professional.
- State of California. (1974). *Health and safety code*. §17922.6, Noise insulation standards.

Resources:

- Standard for Maximum Interior Noise Level, 24 C.F.R. § 51.101(a)(9) (1998).
- U.S. Department of Housing and Urban Development. (n.d.). *Sound transmission class guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_16419.pdf

3. SAFETY AND PERSONAL SECURITY

3.1. Egress.

Requirement:

In accordance with local fire codes, every dwelling unit shall have at least two means of egress that serve as emergency escapes and rescue openings. Each egress shall lead outside without passing through another dwelling unit.

3.1.1. Egress routes shall be unobstructed. Doors along egress routes shall be openable from the inside without the use of a key or tool.

3.1.2. Any bedroom located below the fourth floor shall be provided with an exterior window openable from the inside that can be used as a means of emergency egress.

3.1.3. If a habitable room partly or totally below grade is intended for sleeping purposes, at least one exterior window shall be openable from the inside and accessible for easy and ready use as an emergency exit. The window shall have the following minimum dimensions: a net clear opening of 5.7 ft² (0.53 m²); 24 inches (61 cm) from the top of the sill to the bottom of head of the window frame; a width of 20 inches (51 cm); and a sill height of not more than 44 inches (112 cm) from the floor.

3.1.3.1. If the window opening sill height is below ground elevation, the horizontal dimension (width times projection) of the window well shall be at least nine ft² (0.84 m²) and the horizontal projection shall extend at least 36 inches (91 cm) from the exterior side of the window.

3.1.3.2. If the egress window well is deeper than 44 inches (112 cm) below ground elevation, there shall be steps or a ladder permanently attached to serve as an emergency exit to ground elevation. The distance between steps or rungs shall be 18 inches (46 cm), their width shall be at least 12 inches (31 cm), and their projection from the wall shall be between three and six inches (7.6 and 15 cm).

3.1.3.3. A door leading directly from the room to the outside that provides an exit at grade level shall fulfill this requirement.

Rationale:

Escape from fire is an important public safety protection. Proper configuration of egress will prevent falls that can result in physical injury, such as bruising, fractures, head, brain, and spinal injuries; allow the timely evacuation of residents in an emergency; and permit entry by rescue workers wearing emergency equipment on their backs.

References:

- International Code Council. (n.d.). *Accessible means of egress*. Retrieved from <http://www.iccsafe.org/safety/Documents/MeansofEgressBroch.pdf>
- International Code Council. (2012). *International fire code*, Chapter 10.
- International Code Council. (2012). *International residential code*, §§ 310, 311.

3.2. Locks/Security.

Requirement:

Means of egress (i.e., windows and/or doors) from dwellings shall have locks.

3.2.1. Following each change in tenancy, the locking devices on the dwelling unit entry doors shall be changed.

3.2.2. Dwelling unit entry doors shall be equipped with a dead bolt lock with a minimum throw of one inch (2.54 cm) that is capable of being opened from the interior side without a key and a device that permits the occupant to see a person at the entry door without fully opening the door.

3.2.3. Exterior doors on multifamily buildings with a common entry that leads into a foyer or hallway shall have a self-closing mechanism and shall be equipped with a locking device capable of being opened from the interior side without a key.

3.2.4. Exterior windows that are capable of being opened and are potential means of entry shall be equipped with a lock on the interior side.

Rationale:

Inadequate home security may result in a fear of a possible burglary occurrence or recurrence, stress caused by a burglary, and injuries caused to occupants by an intruder (aggravated burglary). The most common harm suffered as a result of burglary or fear of burglary is emotional stress. The emotional impact is greater for burglaries where there is successful entry to the dwelling. The risk of entry increases with declining levels of security.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

3.3. Smoke Alarm.

Requirement:

Every dwelling unit shall have a functioning smoke alarm located on the ceiling outside each sleeping area in the immediate vicinity of the bedrooms, in each additional room used for sleeping purposes, and on every level except crawlspaces and uninhabitable attics. In dwellings or dwelling units with split levels that have no door between adjacent levels, the smoke alarm installed on the upper level shall suffice for the adjacent lower level. In the event a smoke alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.3.1. In multifamily housing, a tamper-proof smoke detection system (interconnected with a central fire alarm system) or stand-alone smoke alarms in good working condition shall be installed on each level including basements, in heating system and storage rooms, in garages, and in other common areas.

3.3.2. Battery-operated smoke alarms and the battery backup for hardwired smoke alarms shall be powered with long-lasting batteries.

3.3.3. Alternative visual notification shall be provided for hearing-impaired occupants.

 **Stretch Provisions:**

- Smoke alarms shall be hardwired with battery backup.
- Smoke alarm batteries shall be sealed-in and tamper-proof.
- Multiple smoke detection stations shall be interconnected.
- Every dwelling unit shall have both a photoelectric smoke alarm and an ionization smoke alarm.

Rationale:

Smoke alarms that are properly installed and maintained play a vital role in reducing fire-related deaths and injuries. Having a working smoke alarm reduces the chances of dying in a reported fire by half. When smoke alarms fail to operate, it is usually because batteries are missing, disconnected, or dead. Research has demonstrated that almost one-quarter of smoke alarm failures were due to dead batteries. Interconnection of smoke alarms allows the warning to reach all occupants at the same time.

Ionization smoke alarm sensors are best suited to detect smoke from highly combustible materials that can create flaming fires, such as flammable liquids, newspapers, and paint cleaning solutions. Photoelectric models are best suited for living rooms, bedrooms, and kitchens, which often contain large pieces of furniture, such as sofas, chairs, mattresses, countertops, et cetera, which will burn slowly and create more smoldering smoke than flames.

References:

- Cleary, T. (2009). *Performance of dual photoelectric/ionization smoke alarms in full-scale fire tests*. Gaithersburg, MD: National Institute of Science and Technology Building and Fire Research Laboratory. Retrieved from http://www.nfpa.org/~media/files/training/conference%20and%20expo/2009%20proceedings/performance_of_combination_photelectric-ionization_smoke_ala.pdf

- International Code Council. (2012). *International fire code*, § 907.
- National Fire Protection Association. (n.d.). *Smoke alarm safety at home*. Retrieved from: <http://www.nfpa.org/~media/files/safety%20information/safety%20tip%20sheets/smokealarmssafetytips.pdf>

3.4. Fire Extinguisher.

Requirement:

Fire extinguishers shall be rated Class ABC and shall be readily accessible.

3.4.1. Each dwelling unit shall have at least one 10-pound fire extinguisher in good working condition in or near the kitchen.

3.4.2. In multifamily housing, there shall be fire extinguishers in common areas on each floor and in areas where flammable or combustible liquids are stored, used, or dispensed. The fire extinguishers shall be located in conspicuous, unobstructed locations that are not obscured from view.

✓ Stretch Provision:

- The dwelling shall have an automatic fire sprinkler system that complies with the applicable locally adopted fire code. If the local fire code has no sprinkler requirement or if no local fire code exists, the installed automatic fire sprinkler system shall comply with either the International Fire Code® or the National Fire Protection Association Standard 1.

Rationale:

Cooking equipment is the second-leading cause of apartment or multifamily housing fire deaths, ranking only behind smoking. Kitchens are the leading area of origin for home structure fires: approximately two of every five (42 percent) home structure fires started in the kitchen or cooking area. Sixteen percent of the civilian deaths, 38 percent of the civilian injuries, and 14 percent of the direct property damage resulted from these fires. Two-thirds (66 percent) of the reported apartment or multifamily housing fires and one-third (33 percent) of the fires in one- or two-family homes originated in the kitchen. When an extinguisher is used, it put out the fire completely in half of the cases and minimized the fire but did not completely put it out in almost one-quarter of the incidents.

Reference:

- Ahrens, M. (2013). *Home fires involving cooking equipment*. National Fire Protection Association. Retrieved from <http://www.nfpa.org/research/reports-and-statistics/fire-causes/appliances-and-equipment/cooking-equipment>

3.5. Carbon Monoxide Alarm.

Requirement:

Every dwelling unit shall have at least one functioning carbon monoxide (CO) alarm on every habitable floor and outside each separate sleeping area, in the immediate vicinity of every bedroom. In the event a CO alarm sounds, the cause of the alarm condition shall be identified and corrected.

3.5.1. Battery-operated CO alarms shall be powered with long-lasting batteries. Hardwired CO alarms shall have long-lasting battery backup.

3.5.2. Alternative visual notification shall be provided for hearing-impaired occupants.

✓ Stretch Provisions:

- CO alarms and combination smoke/CO alarms shall include voice notification.
- If a combination ionization sensor smoke/CO alarm is used, a second smoke alarm utilizing photoelectric smoke sensors shall be installed.
- CO alarm batteries shall be sealed-in and tamper-proof.
- CO present at or above 30 ppm (35 mg/m³) when measured over one hour, or above nine ppm (10.5 mg/m³) measured over eight hours, shall be deemed hazardous. The cause of a hazardous indoor CO level shall be investigated to identify and eliminate its source.

Rationale:

CO is a colorless, odorless, and extremely toxic gas. Blood hemoglobin has a greater affinity for CO than it does for oxygen, which means that inhalation of this gas will reduce the ability of the blood to take up oxygen. At high concentrations, CO can cause unconsciousness and death. The highest rate of deaths from CO poisoning occurs in older age groups, especially in people aged 75-plus years. This may be for several reasons, including the increasing prevalence of cardiovascular illness and neurological decline at older ages and the fact that the elderly tend to spend a high proportion of their time at home indoors.

At lower concentrations, CO may cause a range of symptoms from headaches, dizziness, weakness, nausea, confusion, and disorientation to fatigue. These symptoms are sometimes confused with influenza and sometimes with depression. In people with ischemic heart disease, it can result in episodes of increased chest pain. CO may also impair fetal development. Those most vulnerable to ill health effects caused by low-level CO exposure include unborn children, infants, children, the elderly, and people with anemia or heart or lung disease.

References:

- American Academy of Pediatrics Council on Environmental Health. (2012). Carbon monoxide, in Etzel R. A., ed. *Pediatric environmental health, 3rd edition*. Elk Grove Village, IL: American Academy of Pediatrics, 367–377.
- National Fire Protection Association. (2012, August 13-14). NFPA technical committee on residential occupancies, NFPA 101 and NFPA 5000 first draft meeting minutes. Retrieved from http://www.nfpa.org/assets/files/aboutthecodes/101/bld-saf-res_fmminutes-08-12.pdf
- National Fire Protection Association. (2009). *NFPA 720, Standard for the installation of carbon monoxide (CO) detection and warning equipment*.
- Underwriters Laboratories. (2009). *ANSI/UL 2034, Standard for single and multiple station carbon monoxide alarms*.
- U.S. Consumer Product Safety Commission. (2001, January). CPSC recommends carbon monoxide alarm for every home. Retrieved from <http://www.cpsc.gov/en/Recalls/2001/CPSC-Recommend-Carbon-Monoxide-Alarm-for-Every-Home/>
- U.S. Consumer Product Safety Commission. (n.d.). Carbon monoxide questions and answers. <http://www.cpsc.gov/en/Safety-Education/Safety-Education-Centers/Carbon-Monoxide-Information-Center/Carbon-Monoxide-Questions-and-Answers/>
- U.S. Environmental Protection Agency. (n.d.). An introduction to indoor air quality (IAQ): Carbon monoxide. <http://www.epa.gov/iaq/co.html>
- World Health Organization. (2010). *Guidelines for indoor air quality: Selected pollutants*. Copenhagen: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf

3.6. Walking Surfaces.

Requirement:

Every interior and exterior stairway, ramp, deck, porch, and balcony shall be maintained structurally sound, in good repair, properly anchored, and capable of supporting the imposed loads.

3.6.1. Treads on exterior stairways shall have nonskid surfaces.

3.6.2. Every interior and exterior stairway with four or more risers shall have at least one structurally sound continuous handrail installed not less than 34 inches (86.7 cm) and not more than 38 inches (96.5 cm), measured vertically from above the nose of the tread. The handrail shall be firmly fastened, capable of supporting a load of 300 pounds, and in good condition. If a side of a stairway is open to the floor or grade below, and the handrail provides the guard required by Subsection 3.7, the rail shall be supported by balusters 34 to 38 inches (86.7 to 96.5 cm) in height, measured vertically from the nose of the tread.

✔ Stretch Provisions:

- Every interior and exterior stairway shall have uniform risers and treads. Risers shall be no higher than 7¾ inches (19.6 cm) and treads shall be at least 10 inches (25.4 cm) deep, unless the existing space and construction do not allow a reduction in pitch or slope.
- Interior and exterior stairways shall have handrails on both sides. Railings shall have a graspable perimeter measuring four to six inches (10–16 cm), and if noncircular in shape, shall have no sharp corners and a width no smaller than five-eighths inch (1.5 cm).

Rationale:

Inadequate handrails and railings on stairways, ramps, decks, porches, and balconies can result in slips, trips, and falls that cause physical injury, such as bruising; fractures; head, brain, and spinal injuries; and death. The likelihood of a fall is doubled if there is no wall or guarding to one side of the stair. Similarly, the lack of any handrail doubles the likelihood of a fall, even if there is a wall to both sides of the stairs. Stair tread depth affects stability during stair descent. The nature of injury is in part dependent on the distance of a fall, and in part on the nature of the surface onto which the victim falls. Although falls on level ground tend to result in relatively minor injuries as compared to other falls, they occur more frequently.

References:

- International Code Council. (2012). *International residential code*, §§ 311.7, 312.1.2, 312.1.3, 312.2.1.
- MetLife. (2013). *The essentials: Falls and fall prevention*. Retrieved from <https://www.metlife.com/assets/cao/mmi/publications/essentials/mmi-falls-fall-prevention-essentials.pdf>
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

Resources:

- Roys, M. (2013). *Refurbishing stairs in dwellings to reduce the risk of falls and injuries*. Garston, U.K.: IHS Building Research Establishment Press.

3.7. Guards.

Requirement:

3.7.1. Every stairway, porch, patio, landing, and/or balcony located more than 30 inches (76.2 cm) above an adjacent area shall have a structurally sound guard between 30 inches (76.2 cm) and 42 inches (107 cm) high, measured vertically from the floor. The guard shall be firmly fastened, capable of supporting normally imposed loads, capable of being opened in case of emergency, and in good condition. Balusters with a minimum thickness of one-half inch (13 mm) shall be placed at intervals that do not allow passage of a sphere greater than four (10.2 cm) inches in diameter. There shall be no climbable cross pieces. If the balusters do not reach the floor, the narrowest opening between the bottom of the stair guard and the floor shall be a maximum of four inches (10.2 cm).

3.7.2. If the vertical distance from the top of the sill of an exterior window opening to the finished grade or other surface below is greater than 72 inches (183 cm), and the vertical distance from the top of the sill to the floor of the room is less than 36 inches (91.5 cm), the window shall have a fall prevention device compliant with ASTM F2006 or ASTM F2090.

3.7.2.1 The fall prevention device for a window that provides access to a fire escape or is otherwise designated for emergency egress shall be compliant with ASTM F2090.

Rationale:

Falls can result in physical injury, such as bruising; fractures; and head, brain, and spinal injuries, as well as death. The nature of injury is in part dependent on the distance of a fall, and in part on the nature of the surface onto which the victim falls. Each year, 5,100 children younger than 18 years of age are treated in U.S. hospital emergency departments for injuries related to falls from windows. Such falls account for approximately eight deaths among children ages five and under each year. Falls from windows cause more severe injuries and deaths than any other

type of fall. A commercially available window guard designed to swing open to allow escape in the event of a fire costs as little as \$20. After window guard requirements took effect in Boston and New York City, the incidence of falls by children from windows decreased 96 percent over 10 years.

References:

- American Society of Testing and Materials. (2010). *F2006, Standard safety specification for window fall prevention devices for non-emergency escape (egress) and rescue (ingress) windows*.
- American Society of Testing and Materials. (2010). *F2090, Standard specification for window fall prevention devices with emergency escape (egress) release mechanisms*.
- City of New York. (2012, June). *Rules*. Title 24 §12, Window guard regulations. Retrieved from <http://www.nyc.gov/html/doh/html/environmental/win-regs.shtml>
- Harris, V., Rochette, L. M., and Smith, G. (2011, September). Pediatric injuries attributable to falls from windows in the United States 2001–2008. *Pediatrics*, 128, 455–462.
- International Code Council. (2012). *International property maintenance code*, § 307.1.
- International Code Council. (2013, April). Climbable guards. Retrieved from <http://www.iccsafe.org/cs/CTC/Documents/0413-meeting/ChildWindowSafety.pdf>
- MetLife. (2013). *The essentials: Falls and fall prevention*. Retrieved from <https://www.metlife.com/assets/cao/mmi/publications/essentials/mmi-falls-fall-prevention-essentials.pdf>
- National Fire Protection Association. (2006). *101 Life safety code*. § 7.2.2.4.5.3.
- Nationwide Children’s Hospital. (n.d.). Window falls. <http://www.nationwidechildrens.org/cirp-window-falls>
- Roys, M. (2013). *Refurbishing stairs in dwellings to reduce the risk of falls and injuries*. Garston, U.K.: IHS Building Research Establishment Press.

3.8. Chemical Storage.

Requirement:

3.8.1. Each dwelling unit shall have a cabinet or other storage space that is lockable or not readily accessible to children for the storage of medicine and household chemical agents.

3.8.2. Storage space for flammable and combustible liquids shall be available either in a building separate from the dwelling’s habitable space or in an adjacent space that is not connected to the dwelling’s ventilation system.

Rationale:

Poison control centers answer more than 3.6 million calls each year, or one call every eight seconds. According to the American Association of Poison Control Centers, children younger than six years old account for about half of the calls placed to poison centers. A flammable or combustible liquid, gas, or associated piping or filter is the main contributor in four percent of fires and eight percent of fire-caused deaths.

References:

- American Association of Poison Control Centers. (n.d.). www.aapcc.org
- U.S. Environmental Protection Agency, Poison Prevention Program. (n.d.). <http://www.epa.gov/pesticides/health/poisonprevention.htm>

3.9. Pools, Hot Tubs, and Other Water Features.

Requirement:

3.9.1. Swimming pools, hot tubs, spas (except a residential spa or hot tub with a safety cover complying with ASTM F 1346-91), ornamental ponds, and other water features that hold water more than 24 inches (61 cm) in depth shall be completely surrounded by a fence or barrier at least 48 inches (122 cm) in height above the finished ground level that is accessible only through a self-closing and self-latching gate. The gate’s latch shall

be located 54 inches (137 cm) above the bottom of the gate on the interior side of the gate facing the water feature. The fence and gate shall not have climbable crosspieces.

3.9.2. All pools and spas shall have anti-entrapment drain covers compliant with ANSI/ASME A112.19.8, ANSI/APSP 16-2011, or any successor standard on every suction outlet.

3.9.3. Pool drains and drain covers shall be clearly visible and in good repair. Where there is a single main drain (other than an unblockable drain), a second anti-entrapment system shall be installed.

3.9.4. Luminaries, receptacles, and other outlets shall have ground-fault circuit interrupter (GFCI) protection.

Rationale:

It takes only inches of water for a small child to drown, so taking extra safety steps at home and around pools, spas, and all bodies of water can prevent drowning incidents. The majority of deaths and injuries in pools and spas involve children ages one to two and occur in residential settings. Drowning is the leading cause of unintentional death to children ages one to four and the second-leading cause of injury-related death in children aged one to 14 years in the U.S.

Children can become entrapped and held under water by suction openings in broken, uncovered, or poorly covered drains. Hair, jewelry, and bathing suit entanglement, as well as the lodging of arms, legs, fingers, or other body parts can pose entrapment hazards. Sitting on a broken or uncovered drain may cause evisceration injuries or disembowelment.

References:

- Consumer Product Safety Commission. (n.d.). *Requirements for public pools*. Retrieved from <http://www.poolsafely.gov/industry-operators-professionals/public-pool-requirements/>
- Consumer Product Safety Commission. (n.d.). *Safety barrier guidelines for residential pools*. Retrieved from <http://www.poolsafely.gov/wp-content/uploads/362.pdf>
- International Code Council. (2012). *International property maintenance code*, §§ 303, 605.3.
- International Code Council. (2012). *International residential code*, § E4203.
- Virginia Graeme Baker Pool and Spa Safety Act. 15 U.S.C. §§ 8001–8008. (2007).

4. LIGHTING AND ELECTRICAL SYSTEMS

4.1. Electrical System.

Requirement:

Every dwelling unit shall have electric service, outlets, and fixtures that are grounded and installed properly, maintained in good and safe working condition, and connected to a source of electric power.

4.1.1. Every dwelling unit shall be supplied with a three-wire, 120/240-volt, single-phase electrical service that is not shared with another dwelling unit.

4.1.2. Temporary wiring or extension cords shall not be used as permanent wiring.

✓ Stretch Provision:

- The electrical service shall have a rating of not less than 100 amperes.

Rationale:

Faulty electrical systems result in fires, damage to property, burns, injuries, and death. In residential settings, children are more likely to be injured than adults, primarily from inserting household objects into electrical outlets.

References:

- Electrical Safety Foundation International. (n.d.). *Electrical safety workbook: A guide to understanding and maintaining your home's electrical system*. Retrieved from www.esfi.org
- U.S. Fire Administration. (n.d.). Electrical fire safety outreach materials. Retrieved from http://www.usfa.fema.gov/citizens/home_fire_prev/electrical.shtm

4.2. Outlets.

Requirement:

Every habitable room shall have at least two separate and remote grounded duplex electric receptacle outlets.

4.2.1. Each kitchen and each room containing a toilet, sink, bathtub, or shower stall shall have at least one grounded duplex electric receptacle outlet protected by ground-fault circuit interrupter (GFCI).

4.2.2. Receptacle outlets in garages, crawl spaces, unfinished basements, and outdoors shall be protected by GFCIs.

✓ Stretch Provisions:

- Habitable rooms shall have sufficient receptacle outlets so that no location on a wall is more than six feet from an outlet.
- Every countertop space 12 inches (305 mm) or wider shall have a grounded duplex electric convenience receptacle outlet protected by a GFCI. No section of counter shall be more than 24 inches (610 mm) measured horizontally from an outlet.
- Receptacle outlets in habitable rooms that are not protected by GFCIs shall be protected by arc-fault circuit interrupters (AFCIs).

Rationale:

Unlike circuit breakers and fuses, GFCIs are installed to protect the user from electrocution. These devices provide protection against electrical shock and electrocution from ground faults or contact with live parts by a grounded individual. They constantly monitor electrical currents flowing into a product. If the electricity flowing through the product differs even slightly from that returning, the GFCI will quickly shut off the current. GFCIs detect amounts of electricity much smaller than those required for a fuse or circuit breaker to activate and shut off the circuit. UL lists three types of GFCIs designed for home use that are readily available, fairly inexpensive, and simple to install. AFCIs prevent electrical fires by protecting branch circuits.

References:

- International Code Council. (2012). *International residential code*. § E3901, E3902.1.
- National Fire Protection Association. (2013). *Standard 70, national electrical code*. Retrieved from <http://www.nfpa.org/70>
- U.S. Centers for Disease Control and Prevention & U.S. Department of Housing and Urban Development. (2006). *Healthy housing reference manual*. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm

4.3. Natural Lighting.**Requirement:**

Every habitable room shall receive daylight from at least one exterior window or skylight.

4.3.1. If a habitable room receives daylight from an adjacent room or area used seasonally, such as a porch, the daylight through this interconnection shall be available year-round.

4.3.2. Every bathroom and kitchen shall comply with the daylight requirement for habitable rooms contained in this section, unless the room is equipped with a ventilation system consistent with Subsection 5.3.

Rationale:

Research has revealed a strong relationship between light and human physiology. The effects of light on both the human eye and human skin are notable. Light allows us to see and affects body rhythms and psychological health. Lack of natural lighting has been linked to depression.

References:

- International Code Council. (2012). *International property maintenance code*, § 402.1, 403.2.
- U.S. Centers for Disease Control & Prevention and U.S. Department of Housing and Urban Development. (2006). *Healthy housing reference manual*. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf

4.4. Artificial Lighting.**Requirement:**

Each room containing a toilet, sink, bathtub, or shower stall shall contain at least one ceiling- or wall-type electric lighting fixture. Each non-habitable room, including laundry rooms, furnace rooms, and public halls, shall contain at least one ceiling- or wall-type electric lighting fixture.

4.4.1. Light switches that control ceiling- or wall-type electric light fixtures shall be located conveniently for safe use.

4.4.2. Every public hall, exterior entry door, and stairway in multifamily housing shall be illuminated at all times by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area. The distance between light fixtures shall not be greater than 30 feet (762 cm).

4.4.3. In a building containing one or two dwelling units, every public hall, exterior entry door, and stairway shall be illuminated by ceiling- or wall-type electric lighting fixtures providing 800 lumens for every 200 ft² (18.6 m²) of floor area that is controlled by a three-way switch or a motion-activated device.

✔ Stretch Provisions:

- Polychlorinated-biphenyl (PCB)-containing lighting ballasts (e.g., older pre-1978 T-12 lighting ballasts) shall be removed, replaced with lighting fixtures that do not contain PCBs, and disposed of in accordance with applicable state and federal regulations.

- The lighting fixtures in public halls, stairways, and entries shall provide 1600 lumens for every 200 ft² (18.6 m²) of floor area.
- The parking areas and walkways of multifamily housing shall be illuminated by outdoor lighting devices suitable for the premises.

Rationale:

Adequate lighting is important in allowing people to see unsanitary conditions and to prevent injury, thus contributing to a healthier and safer environment. Improper indoor lighting can also contribute to eyestrain from inadequate illumination, glare, and flicker. Artificial light is particularly important where domestic tasks require adequate light; for example, in the kitchen over worktops, sinks, and ranges.

References:

- International Code Council. (2012). *International property maintenance code*, § 402.2.
- U.S. Centers for Disease Control and Prevention and U.S. Department of Housing and Urban Development. (2006). *Healthy housing reference manual*. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm
- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (2012). *Polychlorinated biphenyls (PCBs) manufacturing, processing, distribution in commerce, and use prohibitions*. Retrieved from www.epa.gov/pcb
- U.S. Environmental Protection Agency. (n.d.). Compact fluorescent light bulbs. Retrieved from <http://www2.epa.gov/cfl>

5. THERMAL COMFORT, VENTILATION, AND ENERGY EFFICIENCY

5.1. Heating, Ventilation, and Air Conditioning Systems.

Requirement:

Facilities for heating, cooling, ventilation, and humidity control shall be maintained in good working condition and operated when necessary for the health and comfort of the occupants and in accordance with the design capacity of the installed equipment. Within 48 hours after equipment has become inoperative due to a mechanical problem or power failure other than a utility outage, an alternative safe source of necessary heating, ventilating, or cooling shall be provided.

5.2. Heating System.

Requirement:

Except in Climate Zone 1, every dwelling shall have a properly installed heating system in good and safe working condition that is capable of safely and adequately heating all habitable rooms, bathrooms, and toilet rooms. The heating system, filtration components, distribution components, heating elements, and cooling elements (if provided), shall be sealed, cleaned, maintained, and operated in accordance with manufacturer specifications and shall be inspected and serviced annually by a licensed heating, ventilation, and air conditioning systems contractor.

5.2.1. Venting and Air Supply for Heating Equipment. Furnaces, water heaters, wood stoves, and other devices that employ combustion-burning fuel shall be vented to the outside of the structure in an approved manner that meets manufacturer specifications and is in compliance with applicable codes and standards (e.g., ANSI 223.1/NFPA 54 National Fuel Gas Code, NFPA 31 Standard for the Installation of Oil-Burning Equipment, NFPA 211 Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) and shall be supplied with sufficient air to support the continuous complete combustion of fuel and prevent backdrafting.

5.2.2. Minimum Heat Temperature. The heating system shall be capable of maintaining a minimum room temperature of 68° F (20° C) in every habitable room, bathroom, and toilet room.

5.2.3. Heating Supply. If the dwelling unit is rented, leased, or let on terms either expressed or implied that heat will be supplied, heat shall be provided to maintain a minimum temperature of 68° F (20° C) in habitable rooms, bathrooms, and toilet rooms; and at no time during the heating season shall the system allow the temperature to exceed 78° F (25° C) in any room.

5.2.4. Forced-Air Systems. Any dwelling with a forced-air system shall have at least one thermostat within each dwelling unit capable of controlling the heating system, and cooling system if provided, to maintain temperature set point between 55° F (13° C) and 85° F (29° C) at different times of the day. The system shall have a clean air filter installed in accordance with manufacturer specifications at each change in tenancy and at least annually. This filter shall have a minimum efficiency reporting value of eight (MERV-8) unless the system is not equipped to use a MERV-8 filter.

5.2.5. Steam and Hot Water Systems. In dwellings with heating equipment utilizing steam or hot water with a temperature of 110° F (43° C) or greater, protective covers/barriers shall be installed on and maintained for exposed surfaces of baseboard units, radiators, and piping between radiators.

5.2.6. Wood Stoves. A wood stove manufactured after June, 1988 shall have a manufacturer's label certifying compliance with the emission standard at 40 C.F.R. § 60 part AAA. Clearance of 30 inches (76 cm) shall be maintained between combustible materials and a stove with no heat shield. Where a heat shield is present, the clearance between combustible materials and the stove shall be compliant with manufacturer specification for the heat shield.

✓ Stretch Provisions:

- Any new combustion heating equipment installed in occupied or conditioned spaces shall be power-vented or sealed (direct-vented) combustion equipment.
- The heating system shall be controlled by a programmable thermostat to avoid temperature extremes.

- The dwelling shall have provisions to maintain the indoor temperature below a maximum of 85° F (29° C) through the use of mechanical air conditioning, ventilation systems, or passive design features.
- Air filters shall be replaced at least every three months.

Rationale:

Exposure to cold temperatures can lead to hypothermia, frostbite, and death. There is a continuous relationship between indoor temperature and vulnerability to cold-related death. As temperatures rise, thermal stress increases, initially triggering the body’s defense mechanisms, such as sweating. High temperatures can increase dehydration, cardiovascular strain, and trauma, and, when temperatures exceed 77° F (25° C), cause mortality and stroke.

Poorly maintained HVAC systems may pose safety risks, including fire and explosion hazards and exposure to combustion-related chemical and physical agents, such as carbon monoxide and particulate matter. Exposure to carbon monoxide can lead to headaches, nervous systems effects, and asphyxiation.

References:

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- International Code Council. (2009). *International energy conservation code*, Table 402.1.1.
- International Code Council. (2012) *International property maintenance code*. §§ 603.2, 603.5, 602.2.2, 602.2.3.
- Ostro, B., Rauch, S., Green, R., Malig, B. & Basu, R. (2010). The effects of temperature and use of air conditioning on hospitalizations. *American Journal of Epidemiology*, 172(9), 1053–1061. Retrieved from <http://aje.oxfordjournals.org/content/172/9/1053.abstract?sid=d5111b06-c02a-4bd4-863a-27ba95c0a75a>
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Resources:

- Air Conditioning Contractors of America. (2010). *HVAC quality installation specification, ANSI/ACCA 9*. Retrieved from <https://www.acca.org/Files/?id=693>
- Building Performance Institute. (2012). *Home energy auditing standard, BPI-1100-T-2012*. http://www.bpi.org/files/pdf/BPI-1100-T-2012_Home%20_Energy_Auditing_Standard.pdf
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- U.S. Environmental Protection Agency. (n.d.). Wood heater compliance monitoring program. Retrieved from <http://www.epa.gov/oecaerth/monitoring/programs/caa/woodheaters.html>
- U.S. Environmental Protection Agency. (n.d.). Remodeling your home? Have you considered indoor air quality? Combustion appliance backdrafting. Retrieved from <http://www.epa.gov/iaq/homes/hipbackdrafting>

5.3. Ventilation.

Requirement:

Natural or mechanical ventilation, or a combination of the two, shall deliver fresh air to every habitable room and bathroom and be capable of removing moisture-laden air and other contaminants generated during cooking, bathing, and showering.

5.3.1. Every dwelling shall have a ventilation system compliant with ASHRAE Standard 62.2 (Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings) or ASHRAE 62.1 (Ventilation for Acceptable Indoor Air Quality) as applicable to the dwelling.

5.3.2. The air exhausted from a bathroom, toilet room, kitchen, clothes dryer, or basement shall not be vented into any other parts of the building's habitable space or an attic; such air shall discharge directly to the outdoors but not near any intake on the building exterior.

5.3.2.1. The exhaust vent from a clothes dryer shall consist of a rigid or corrugated semi-rigid metal duct.

5.3.3. Pipes, ducts, conductors, fans, and blowers shall not discharge gases, steam, vapor, hot air, grease, smoke, odors, or other gaseous or particulate wastes directly upon abutting or adjacent public or private property or that of another occupant. Vent pipe openings and any pest-proofing screens that cover them shall be maintained free of debris.

5.3.4. Basement air shall not be used as supply air for an air handling system.

✔ Stretch Provision:

- HVAC equipment shall have the capacity to maintain indoor relative humidity (RH) at or below 60 percent.

Rationale:

Proper circulation of outdoor ventilation air throughout a habitable space, naturally through openings in the building envelope and/or mechanically using fans and HVAC systems, is important to dilute and remove airborne indoor chemical agents, and reduce airborne transmission of biological agents, humidity, and mold. Inadequate ventilation also increases carbon dioxide in habitable spaces, which may yield drowsiness and headaches and can result in elevated levels of volatile organic chemicals that off-gas from interior dwelling components. Inadequate ventilation also increases interior humidity. Studies show the association between dampness and poor health. Damp environments are associated with the growth of dust mites, cockroaches, and mold. Some of the health effects include worsened asthma, wheezing, nausea and vomiting, headaches, fever, and diarrhea. Inadequately maintained or operated HVAC systems can lead to microbial growth.

References:

- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2013). *62.2 Standard, Ventilation and acceptable indoor air quality in low-rise residential buildings*. Retrieved from <https://www.ashrae.org/resources--publications/bookstore/standards-62-1--62-2>
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- International Code Council. (2009). *International energy conservation code*. Table 301.1 and Figure 301.1. Retrieved from <http://energycode.pnl.gov/EnergyCodeReqs/>
- International Code Council. (2012). *International property maintenance code*. §§ 403.1, 403.2, 403.5, 302.6.
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- Wisconsin Department of Public Health Services. (n.d.). Carbon dioxide fact sheet. Retrieved from <http://www.dhs.wisconsin.gov/eh/chemfs/fs/carbondioxide.htm>

Resources:

- Enterprise Community Partners. (2011). *2011 Enterprise green communities criteria*, 92–94. Retrieved from <http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000FxxwvNEAR>

5.4. Air Sealing.

Requirement:

Openings into dwellings and dwelling units shall be sealed to limit uncontrolled air movement.

5.4.1. Exterior doors, windows and skylights, openings where siding and chimneys meet, utility penetrations, electrical outlets, and other openings shall be weathertight.

5.4.1.1. Pads, door sweeps, weather stripping, and seals shall be used and maintained to minimize air leaks.

5.4.2. Openings separating an attached garage from a habitable room, including doors, ceilings, floors, and utility and ductwork penetrations, shall be sealed.

5.4.2.1. Any doorway between a habitable room and a garage shall be equipped with a wood door not less than 1³/₈ inches (35 mm) in thickness, a solid or honeycomb core steel door not less than 1³/₈ inches (35 mm) thick, or a 20-minute fire-rated door. The door shall have an automatic closing mechanism and be sealed with weather stripping.

5.4.2.2. There shall be no door, window, or other opening from a garage into a room used for sleeping purposes.

5.4.3. Heating and air conditioning system ductwork and air handling units located in an attached garage shall be correctly insulated and sealed.

5.4.3.1. There shall be no supply or return vent openings in a garage that connect to air handlers serving habitable spaces.

5.4.4. In a multifamily building, walls, ceilings, and floors that separate a dwelling unit from neighboring units, corridors, chases, stairwells, and other openings shall be sealed.

 **Stretch Provision:**

- Air handling equipment and associated ductwork shall be relocated from a garage to an area within the conditioned space.

Rationale:

Controlling air leakage into homes can save the occupant money by making the home energy efficient and can prevent health problems associated with moisture. Airborne moisture can lead to mold growth, which causes respiratory distress in children and adults, including those with asthma, allergies, or other respiratory diseases. Air-sealing and isolation of attached garages is important to prevent migration of carbon monoxide and other airborne chemical agents (e.g., from vehicle exhaust, fuels, solvents, and other chemicals stored or used in the garage) into habitable rooms. Sealing of each unit can help prevent migration of smoke, cooking odors, noise, radon, pests, and other elements into the dwelling unit.

References:

- International Code Council. (2012). *International residential code*. § 302.5.1.
- Jacksonville Energy Authority. (2013). Get to know your home's envelope. Retrieved from https://www.jea.com/Manage_My_Account/Ways_to_Save/Saving_By_Room/Whole_House/Wholehouse.aspx

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6. MOISTURE CONTROL, SOLID WASTE, AND PEST MANAGEMENT

6.1. Moisture Prevention and Control.

Requirement:

Every foundation, roof, roofing component, exterior wall, door, skylight, and window shall be watertight, weathertight, free of persistent dampness or moisture, and in good condition.

6.1.1. The building's drainage system, such as footing or foundation drains, gutters, downspouts, rainwater collection containers, or other elements, shall direct water away from the structure.

6.1.2. Exterior wood surfaces shall be protected from the elements and decay by paint or other protective treatment. Weep holes in brickwork shall be left open.

6.1.3. Premises shall be graded and maintained to prevent the erosion of soil and to prevent the accumulation of water on the premises, within a crawlspace, or within the structure.

6.1.4. Interior and exterior surfaces and surface coverings, such as but not limited to carpet, wood, cellulose insulation, and paper, paint, and other wall coverings, including paper-faced gypsum board, shall have no signs of visible mold growth or chronic or persistent excessive dampness or moisture.

6.1.5. Building material that is discolored or deteriorated by mold or mildew or causes a moldy or earthy odor shall be cleaned, dried, and repaired. Structurally unsound material shall be removed and replaced.

6.1.5.1. Removal and repair of moldy material shall be conducted in accordance with New York City's *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*, the Institute of Inspection, Cleaning, and Restoration Certification's *IICRC S520 Standard and Reference Guide for Professional Mold Remediation*, or the EPA guidelines for *Mold Remediation in Schools and Commercial Buildings*.

6.1.6. The underlying cause of excessive dampness or moisture or moldy or earthy odor shall be investigated and corrected.

6.1.7. Cold HVAC and plumbing components and systems (e.g., chilled-water pipes and valves, refrigerant piping, and valves) in readily accessible locations shall be sufficiently and continuously insulated to keep the temperature of their surfaces at least 10° F (4° C) above the dew point of the surrounding air.

6.1.8. Unless the crawl space is sealed and insulated from the outdoors, the crawl space shall be free of high-moisture conditions or be separated from the dwelling by an air seal or other method suitable to the climate and conditions.

✓ Stretch Provisions:

- Exterior weather-resistant barrier systems shall be used to reduce potential for water leaks and moisture intrusion.
- Water/mold-resistant materials shall be used on bathroom walls and floors, showers, and other areas of the home that are likely to be exposed to moisture.
- In warm-humid and mixed-humid climates:
 - Exterior wall insulations shall not include a vapor barrier/retarder material on the interior side (such as plastic sheeting or foil facing), with the exception of closed-cell foam insulation (spray or rigid), kraft-faced insulation, and seasonally adjusting membranes.
 - There shall be no vinyl wallpaper or other impermeable interior finish on the interior surface of exterior walls within an air-conditioned dwelling.
 - Exterior drainable rigid insulation systems shall be used to reduce wall assembly condensation risk.
- The building and its systems shall meet the following moisture management criteria:
 - When the building is being mechanically cooled, ventilation air shall be dried to a dew point value below the building's dew point.

- Condensation inside HVAC components and air distribution ductwork shall be drained to an appropriate sanitary drain or condensate collection system.
- Indoor surfaces of both occupied and unoccupied spaces shall not be cooled to temperatures so low as to create an average surface relative humidity (RH) of over 80 percent that lasts for more than 30 days on visible surfaces in occupied spaces and surfaces inside building cavities and unconditioned space.
- Indoor dew point shall be low enough to ensure no condensation occurs on the exposed surfaces of cool HVAC components or on building materials or furnishings.
- Humidifiers shall be sized, installed, and controlled so they do not overload the air with humidity, which increases the risk of condensation inside air distribution systems and exterior walls and roofing assemblies.

Rationale:

Damp indoor environments can increase the presence of biological agents such as mold, dust mites, and bacteria. These environments may also attract pests and cause building materials to deteriorate. Exposure to allergens can trigger allergic symptoms such as rhinitis, conjunctivitis, eczema, cough, and wheeze. For a sensitized person, repeated exposure can lead to asthma, and it appears that the severity of the asthma intensifies with increasing humidity, house dust mite, and mold levels. There is an association between dampness and upper respiratory tract symptoms, cough, wheeze, and asthma symptoms in sensitized persons. In addition there is limited or suggestive evidence that damp indoor environments are associated with dyspnea, lower respiratory illness in children, and asthma development.

Some fungi, particularly when in very high concentrations, can also colonize the airways of susceptible individuals, particularly asthmatics. Toxins from some molds (mycotoxins) can cause nausea and diarrhea, can suppress the immune system, and have been implicated in cases of pulmonary hemorrhage.

References:

- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2012). *Position document on limiting indoor mold and dampness in buildings*. Retrieved from <https://www.ashrae.org/File%20Library/docLib/About%20Us/PositionDocuments/Position-Document---Limiting-Indoor-Mold-and-Dampness-in-Buildings.pdf>
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Resources:

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6.2. Solid Waste.

Requirement:

Every dwelling shall have adequate facilities for temporary storage of trash and recyclable materials.

6.2.1. There shall be trash containers outside the dwelling for the storage of trash awaiting collection or disposal. The total capacity of these facilities shall be sufficient to store occupants' trash between scheduled collection times, and shall be placed on a cleanable surface constructed to minimize spillage.

6.2.2. There shall be containers outside the dwelling for recyclable materials awaiting collection, with capacity sufficient to store occupants' recyclable materials between scheduled collection times.

✓ Stretch Provision:

- Exterior trash and recycling containers shall be placed at least 30 feet (nine meters) from the building, unless such space is not available.

Rationale:

In 2010, Americans generated about 250 million tons of trash and recycled and composted over 85 million tons of this material, equivalent to a 34.1 percent recycling rate. On average, we recycled and composted 1.51 pounds of our individual waste generation of 4.43 pounds per person per day. The risk that poorly stored or accumulated solid waste poses to health is difficult to quantify as little epidemiological work in this area has been reported recently. The potential health outcomes may include gastrointestinal disease (from spread of infection) and asthma and allergic rhinitis (from allergens). Household waste may, in addition, present a physical hazard of cuts to young children. Emotional distress is also commonly associated with pest infestations and accumulations of solid waste. Establishing solid waste collection, storage, and disposal provisions helps reduce pest infestations, the growth and spread of biological agents, odor emissions, and windblown litter.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (n.d.). Municipal solid waste. <http://www.epa.gov/epawaste/nonhaz/municipal/index.htm>

6.3. Pest Management.

Requirement:

Integrated pest management (IPM) methods shall be used to maintain every dwelling free of infestation, openings that allow pest entry, conditions that harbor pests or provide them with food or water, and visible pest residue or debris.

6.3.1. A pest management professional who has an IPM certification or a person trained in IPM shall develop the IPM program for a multifamily building.

6.3.2. Every dwelling, premise, accessory structure, and fence shall be maintained in good repair, free of pest infestation, and inspected for pests and building conditions that attract and support pests.

6.3.2.1. There shall be no accumulation of trash, paper, boxes, lumber, scrap metal, food, or other materials that support rodent harborage in or about any dwelling or premises. Stored materials shall be placed in boxes or stacked in stable piles elevated at least six inches (152 mm) above the ground or floor and at least six inches (152 mm) from the walls. Stored materials shall not block any egress routes.

6.3.2.2. There shall be no trees, shrubs, or other plantings in the soil within six inches (152 mm) of any dwelling.

6.3.2.3. There shall be no accumulation of water in or about any dwelling or premises.

6.3.3. Every openable window and storm door shall be supplied with adequate screens to prevent the entry of pests.

6.3.4. There shall be no holes or open joints in exterior walls, foundations, slabs, floors, or roofs that equal or exceed one-eighth inch (3 mm).

6.3.4.1. The areas surrounding windows, doors, pipes, drains, wires, conduits, vents, and other openings that penetrate exterior walls shall be sealed with low-VOC caulk or closed cell insulation.

6.3.5. Pest infestation and the underlying cause shall be eliminated using control methods consistent with IPM, such as exclusion, sanitation, and least-risk pesticides scaled to and designed for the targeted infestation.

6.3.5.1. Foggers and organic phosphates shall not be used to control or eliminate pests.

Rationale:

Poorly stored food waste will attract pests. These pests may then come into contact with food before it is prepared or eaten or may come into direct contact with persons. Rodents have long been linked to property destruction and disease. Rodents are known to be infected with pathogenic organisms, including zoonotic agents such as *Yersinia enterocolitica* (Yersiniosis), *Listeria spp* (Listeriosis), *Cryptosporidium parvum* (Cryptosporidiosis), *Toxoplasma gondii* (Toxoplasmosis), *Leptospira spp* (Leptospirosis), *Trichinella spiralis*, and *Trichuris spp* (Whipworm infection). Proper food storage, rat-proofing construction, and ensuring good sanitation outside the home have served to eliminate or reduce rodent problems in the 21st century home.

Children who live in dwellings infested with cockroaches show high levels of sensitivity to cockroach allergen. Contact with cockroaches can cause dermatitis, urticaria, rhinitis, bronchitis, and asthma. Some people have an aversion to insects amounting to a phobia and can suffer anxiety when in the presence of the insects. Bed bugs are pests of significant public health importance, as are mosquitoes, fleas, and other insects.

Integrated pest management (IPM) is the best way to prevent and eliminate pests while preventing unnecessary occupant inhalation and ingestion of poisonous pesticide chemicals. Total release foggers are ineffective as methods in controlling most pests, often counteract less toxic strategies, and can result in resident exposure to toxic chemical agents, and if misused can cause fires, other destruction of property, and loss of life.

Certified pest management professionals (PMPs) with knowledge and experience of IPM, and other individuals trained in IPM, can be critical resources for buildings owners and managers.

References:

- U.S. Department of Housing and Urban Development—Office of Healthy Homes and Lead Hazard Control. (2010). *Healthy home rating system—Operating guidance*. Retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=operating_guidance_hhrs_v1.pdf
- U.S. Environmental Protection Agency. (n.d.). Pesticides: Controlling pests: Controlling rodents. Retrieved from <http://www.epa.gov/pesticides/controlling/rodents.htm>

Resources:

- City and County of San Francisco. (2013). *Pest prevention by design guidelines*. Retrieved from <http://www.sfenvironment.org/download/pest-prevention-by-design-guidelines>
- New York City Department of Health and Mental Hygiene. (2008, April). *Preventing rats on your property: A guide for property owners and tenants*. (EHS Publication No. EHS6356051 - 4.08). New York: Author. Retrieved from http://www.nyc.gov/html/doh/downloads/pdf/pest/rodent_control.pdf
- Stop Pests in Housing Program. (n.d.). www.stoppests.org
- U.S. Department of Housing and Urban Development. (2011, April 26). Promotion of integrated pest management (IPM) as an environmentally-sound, economical and effective means to address a major resident concern. (PIH Notice No. 2011-22). Retrieved from <http://portal.hud.gov/hudportal/documents/huddoc?id=11-22pihn.doc>

7. CHEMICAL AND RADIOLOGICAL AGENTS

7.1. General Requirements.

Requirement:

All chemical and radiological agents in dwellings, premises, and accessory structures, including but not limited to deteriorated lead-based paint, friable asbestos-containing material, formaldehyde, volatile organic compounds, radon, pesticides, and methamphetamine, shall be contained, stored, removed, or mitigated in a safe and healthy manner consistent with federal, state, and local laws and regulations. When an applicable regulatory limit is more protective than the level included in this section, the more restrictive limit shall apply.

7.2. Lead-Based Paint.

Requirement:

7.2.1. Lead levels at or above federal regulatory limits pursuant to 40 C.F.R. § 745.65 are deemed hazardous: (1) lead-based paint on an existing painted surface—0.5 percent by weight or 1.0 milligrams per square centimeter; (2) dust on floors—40 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—250 $\mu\text{g}/\text{ft}^2$; (4) dust on window troughs (wells)—400 $\mu\text{g}/\text{ft}^2$; (5) bare soil in children’s play areas—400 parts per million (ppm) of lead; and (6) bare soil in areas of the yard that are not children’s play areas—1,200 ppm.

7.2.2. Painted surfaces shall be maintained intact. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), deteriorated paint at a property built before 1978 shall be repaired in accordance with the renovation requirements of 40 C.F.R. § 745 Subpart E, and the underlying cause of the deterioration shall be corrected.

7.2.3. All renovation, repair, and painting work that disturbs a painted surface in a pre-1978 dwelling shall be performed in accordance with the renovation requirements of 40 C.F.R. § 745, Subpart E, unless the paint has been tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a). Dust clearance testing shall be performed at the conclusion of renovation work.

7.2.4. With the exception of paint that is tested and found not to contain lead-based paint in accordance with 40 C.F.R. § 745.82(a), a painted surface shall not be disturbed using methods that involve (1) open-flame burning or torching or operating a heat gun at temperatures above a maximum of 1,100° F (593° C); or (2) power sanding, grinding, power planing, needle gun, abrasive blasting, or sandblasting unless such machines have shrouds or containment systems and a High-Efficiency Particulate Air (HEPA) vacuum attachment that collects dust and debris at the point of generation. The shroud or containment system shall release no visible dust or air outside the shroud or containment system.

7.2.5. Lead-based paint shall not be applied to the interior or exterior surface of any dwelling or dwelling unit.

✔ Stretch Provision:

- Lead present at or above the following limits is deemed hazardous: (1) lead-based paint on a friction, impact, or chewable surface, damaged or otherwise deteriorated, or non-intact—0.06 percent by weight; (2) dust on floors—10 micrograms of lead per square foot of settled dust ($\mu\text{g}/\text{ft}^2$); (3) dust on interior window sills—100 $\mu\text{g}/\text{ft}^2$; and (4) 40 $\mu\text{g}/\text{ft}^2$ on porches.

Rationale:

Lead is a heavy metal that accumulates in the body when ingested and has toxic effects on the nervous system, cognitive development, and blood-forming systems and numerous other systems production. Sources of lead include lead-based paint and the dust it generates, soil, drinking water, and consumer and other products. Lead-contaminated soil may be found particularly around older buildings contaminated by flaking external paintwork, adjacent to industrial premises using (or previously having used) lead, and near busy roads from the exhaust fumes from leaded gasoline. Lead is readily absorbed from the intestinal tract, especially in children, and its absorption is enhanced by dietary deficiency of iron and calcium.

Even with relatively low levels of lead in blood, studies show effects on a child’s nervous and other systems. The highest risk group is young children aged 0-5 years, because of lead’s potential effect on neurological development

and because physiologically they take up lead more readily. Pregnant women and their babies are at risk since lead can pass through the placental barrier.

References:

- Dixon, S. L., Gaitens, J. M., Jacobs, D. E., Strauss, W., Nagaraja, J., Pivetz, T., Wilson, J. W., & Ashley P. J. (2009, March). Exposure of U.S. children to residential dust lead, 1999–2004: II. The contribution of lead-contaminated dust to children’s blood lead levels. *Environmental Health Perspectives*, 117(3): 468–474. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/19337524>
- Gaitens, J. M., Dixon, S. L., Jacobs, D. E., Nagaraja, J., Strauss, W., Wilson, J. W., & Ashley, P. J. (2009, March). Exposure of U.S. children to residential dust lead, 1999–2004: I. Housing and demographic factors. *Environmental Health Perspectives*, 117(3): 461–467. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2661918/>
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- National Center for Healthy Housing et al. (2009). Communication to the Environmental Protection Agency. Retrieved from http://www.nchh.org/Portals/0/Contents/EPA_Lead_Standards_Petition_Final.pdf
- Residential Property Renovation, 40 C.F.R. § 745 Subpart E (2008).

7.3. Asbestos.

Requirement:

Every owner shall maintain in good repair all asbestos-containing material on the premises. All asbestos-containing material shall be maintained non-friable and free from any defects such as holes, cracks, tears, and/or looseness that may allow the release of fibers into the environment.

7.3.1. Friable asbestos-containing material shall be abated by licensed asbestos professionals in accordance with federal, state, or local requirements.

7.3.2. Any renovation, demolition, or other activity that will disturb asbestos-containing materials shall be preceded by asbestos abatement performed by certified asbestos professionals in accordance with federal, state, or local requirements.

7.3.3. Abatement, removal, and disposal of all asbestos-containing material shall comply with all appropriate federal, state, and local requirements.

Rationale:

Exposure to asbestos increases the risk of developing lung disease. Disease symptoms may take many years to develop following exposure. Asbestos products were historically used extensively in building materials. Vermiculite insulation in homes may be contaminated with asbestos. A mine near Libby, Montana was the source of over 70 percent of all vermiculite sold in the United States from 1919 to 1990. There was also a deposit of asbestos at that mine, so the vermiculite from Libby was contaminated with asbestos. Vermiculite from Libby was used in the majority of vermiculite insulation in the United States and was often sold under the brand name Zonolite. Vermiculite insulation should be assumed to be contaminated with asbestos and should not be disturbed. Trained professionals must be hired to remove vermiculite insulation. Many asbestos-containing materials continue to be legal to sell and to use. Intact asbestos is not a hazard; it becomes a hazard when it is damaged or deteriorated and releases friable asbestos. The EPA and most states certify or license asbestos inspectors.

References:

- Agency for Toxic Substances and Disease Registry. (2001). *Public health statement for asbestos*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved from: <http://www.atsdr.cdc.gov/toxprofiles/phs61.html>
- Asbestos National Emissions Standards for Hazardous Air Pollutants. 40 C.F.R. §§ 61.140-157 (1971).
- U.S. Centers for Disease Control and Prevention & U.S. Department of Housing and Urban Development. (2006). *Healthy housing reference manual*. Retrieved from www.cdc.gov/nceh/publications/books/housing/housing.htm.
- U.S. Environmental Protection Agency. (n.d.). Protect your family from asbestos-contaminated vermiculite insulation. <http://www2.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation>

7.4. Toxic Substances in Manufactured Building Materials

Requirement:

7.4.1. Building materials consisting of hardwood plywood, medium-density fiberboard, and particleboard as defined by 15 U.S.C. 2697(b)(2) shall not be used in maintenance and renovations within dwellings, unless the materials have been certified to meet the formaldehyde emission standards of 15 U.S.C. 2697(b)(2):

- (1) Hardwood plywood with a veneer core, 0.05 parts per million (ppm);
- (2) Hardwood plywood with a composite core, 0.05 ppm;
- (3) Medium-density fiberboard, 0.11 ppm;
- (4) Thin medium-density fiberboard, 0.13 ppm; and
- (5) Particleboard, 0.09 ppm.

7.4.2. Building materials used in maintenance and renovations, including but not limited to paints, coatings, primers, glues, resins, adhesives, and floor coverings, shall be certified as having no volatile organic chemicals (VOCs) or low VOC emissions, and having no halogenated flame retardants (HFRs).

Rationale:

Formaldehyde is a prominent VOC found in household and construction products. It is a colorless, strong-smelling gas that can cause watery eyes; burning sensations in the eyes, nose, and throat; nausea; coughing; chest tightness; wheezing; skin rashes; and allergic reactions. Laboratory animal studies have revealed that formaldehyde can cause cancer in animals. Formaldehyde is classified by the World Health Organization as a known human carcinogen. The most significant source of formaldehyde in homes has been pressed wood products made using adhesives that contain urea formaldehyde (UF) resins. These products include particleboard (used as subflooring and shelving and in cabinetry and furniture), hardwood plywood paneling (used for decorative wall covering and used in cabinets and furniture), and medium-density fiberboard (used for drawer fronts, cabinets, and furniture tops). Medium-density fiberboard contains a higher resin-to-wood ratio than any other UF pressed wood product and is generally recognized as being the highest formaldehyde-emitting pressed wood product.

Pending EPA regulations will implement the Formaldehyde Standards for Composite Wood Products Act to limit formaldehyde emissions from composite wood products and finished goods that contain composite wood products in the U.S. The World Health Organization has recommended a short-term (30-minute) indoor formaldehyde exposure guideline of 0.1 mg/m³ to prevent sensory irritation in the general population.

Interior paints and primers, glues, and adhesives may release VOCs, particularly when drying. Exposure to individual VOCs and mixtures of VOCs can cause or aggravate health conditions, including allergies, asthma, and irritation of the eyes, nose, and airways; however, no health-based standards for indoor non-occupational exposure have been set.

Halogenated flame retardants (HFRs) used in fabrics, foams, and various plastics disrupt thyroid and estrogen hormones, which can cause developmental effects, such as permanent changes to the brain and to reproductive systems (including reduced sperm count in males and changes to ovarian cell structure in females).

References:

- Enterprise Communities Partners. (2011). *Enterprise green communities criteria*. Retrieved from <http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000FwxwvNEAR>
- Formaldehyde Emission Controls for Certain Wood Products. 24 C.F.R. § 3280.308. (1984).
- Formaldehyde Standards for Composite Wood Products Act. 15 U.S.C. § 2697. (2010).
- National Cancer Institute. (n.d.). Formaldehyde and cancer risk. Retrieved from <http://www.cancer.gov/cancertopics/factsheet/Risk/formaldehyde>
- National Toxicology Program. (2011, June). *Report on carcinogens, twelfth edition*. Department of Health and Human Services, Public Health Service. Retrieved from <http://ntp.niehs.nih.gov/go/roc12>
- Offerman, F. (2009, November). *Ventilation and indoor air quality in new homes*. California Air Resources Board and California Energy. Retrieved from <http://www.arb.ca.gov/research/apr/past/04-310.pdf>

- State of California. (2007). Airborne toxic control measures (ATCM) to reduce formaldehyde emissions from composite wood products. California Code of Regulations, Title 17, §§ 93120-92120.12. Retrieved from <http://www.arb.ca.gov/regact/2007/compwood07/fro-final.pdf>
- U.S. Consumer Product Safety Commission. (2013). *An update on formaldehyde: 2013 revision*. Bethesda, MD: Author. Retrieved from <http://www.cpsc.gov/PageFiles/121919/AN%20UPDATE%20ON%20FORMALDEHYDE%20final%200113.pdf>
- U.S. Environmental Protection Agency. (2013). *Formaldehyde emissions from composite wood products*. Retrieved from <http://www.epa.gov/oppt/chemtest/formaldehyde/>
- World Health Organization Regional Office for Europe. (2010). *WHO guidelines for indoor air quality: Selected pollutants*. Copenhagen: Author. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf

Resources:

- Collaborative for High Performance Schools. (n.d.). High performance products database. Retrieved from <http://www.chps.net/dev/Drupal/node/445>
- Underwriters Laboratories. (n.d.). Greenguard certification from UL Environment: Healthier schools. Retrieved from <http://greenguard.org/en/HealthierSchools.aspx>
- Green Seal. (n.d.). Find green products and services. Retrieved from <http://www.greenseal.org/FindGreenSealProductsAndServices.aspx>
- Healthy Building Network. (n.d.). <http://www.healthybuilding.net/>
- Master Painters Institute. (2010, January). MPI introduces “Extreme Green™” paint standard. Retrieved from http://www.paintinfo.com/MPInews/ExtremeGreen_Jan2010.shtml
- Scientific Certification Systems. (2007, May). *SCS - EC10.2 -2007: Environmental certification program: Indoor air quality performance*. Retrieved from <http://www.scs-certified.com/docs/SCS-EC10.2-2007.pdf>

7.5. Radon.

Requirement:

Radon present at levels at or above the EPA action level of four picocuries radon per liter of air (pCi/L) in the lowest habitable level of the dwelling shall be deemed hazardous. Radon levels shall be determined by an approved testing method in accordance with state and local requirements. Radon levels exceeding four pCi/L shall be mitigated by a qualified radon mitigation professional who meets state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

✓ Stretch Provision:

- Radon present at levels at or above two pCi/L in the lowest habitable level of the dwelling shall be deemed hazardous. Radon determined by an approved testing method to exceed two pCi/L shall be mitigated by qualified radon mitigation professionals in accordance with state and local requirements. If there are no state or local requirements qualifying radon testing and mitigation professionals, radon testing and mitigation shall be performed by a professional certified by a national private-sector radon proficiency program.

Rationale:

The U.S. Environmental Protection Agency (EPA) estimates that about 21,000 lung cancer deaths each year in the U.S. are radon-related. Exposure to radon is the second-leading cause of lung cancer after smoking. Radon is an odorless, tasteless, and invisible gas produced by the decay of naturally occurring uranium in soil and water. Radon decays rapidly and the resulting products quickly attach themselves to particles in the air. If these particles are inhaled, they can be deposited in the lungs, where the process of radioactive decay continues. The particles emitted can cause cells lining the lungs to mutate genetically and initiate cancer or facilitate a process already initiated by other carcinogens. The risk related to radon increases with dose and duration of exposure. The highest risk is for smokers. As radon is soluble in water, it can be ingested, resulting in the organs of the gastrointestinal

tract receiving the largest dose. EPA has established a recommended maximum exposure level of four pCi/L in occupied areas. Approximately one in 15 homes nationwide has radon above this level.

References:

- American Association of Radon Scientists and Technologists, Inc. (n.d.). National radon proficiency program. Retrieved from <http://nrpp.info/>
- American Association of Radon Scientists and Technologists, Inc. (2012). *ANSI-AARST standard: Protocol for conducting radon and radon decay product measurements in multifamily buildings (MAMF-2012)*. Retrieved from http://www.aarst.org/standards/messages/296/AARST_MAMF_DraftClean_06-09opt-2127.pdf
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- U.S. Department of Health and Human Services Press Office. (2005, January 13). Surgeon General releases national health advisory on radon. [Press release.] Retrieved from <http://www.surgeongeneral.gov/news/2005/01/sg01132005.html>
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- U.S. Environmental Protection Agency. (2013). Radon (Rn): Where you live. Retrieved from <http://www.epa.gov/radon/whereyoulive.html>

7.6. Pesticides.

Requirement:

Pesticides shall only be used in accordance with IPM methods discussed in Section 6.3, using the least toxic pesticide with demonstrated efficacy for the identified pest.

7.6.1. Pesticides shall be applied only in areas and at concentrations which comply with manufacturer specifications. When it is determined by an approved method that a hazardous amount of a pesticide has been applied in a location or at a concentration contrary to manufacturer specifications, the hazard shall be immediately mitigated.

7.6.2. Pesticides shall be stored and disposed in accordance with manufacturer specifications.

Rationale:

The health effects of pesticides vary with the product, but most products affect the eyes, noses, and throats. More severe consequences, such as central nervous system and kidney damage and increased cancer risk, are possible. An EPA survey revealed that bathrooms and kitchens are areas in the home most likely to have improperly stored pesticides. In the United States, EPA regulates pesticides under the pesticide law known as the Federal Insecticide, Fungicide, and Rodenticide Act. Since 1981, this law has required most residential-use pesticides to bear a signal word, such as "danger" or "warning," and to be contained in child-resistant packaging. This type of packaging is designed to prevent or delay access by most children under the age of five years.

References:

- National Pesticide Information Center. (n.d.). www.npic.orst.edu.
- U.S. Environmental Protection Agency. (n.d.). An introduction to indoor air quality (IAQ): Pesticides. Retrieved from <http://www.epa.gov/iaq/pesticid.html>

7.7. Methamphetamine.

Requirement:

A dwelling that has been used for methamphetamine manufacture shall be vacated until certified by an approved testing method as safe from hazardous materials related to the methamphetamine manufacturing process.

Rationale:

Homes formerly used as methamphetamine labs put residents, especially children, at serious health risk. Methamphetamine can be inhaled or absorbed through the skin. Effects resulting from acute exposures include cough; headache; chest pain; burns to skin, eyes, nose, and mouth; shortness of breath; dizziness; pulmonary edema; coma; and death. Exposure over a longer period can lead to liver and kidney damage, neurological problems, and an increased risk of cancer.

References:

- American Academy of Pediatrics Council on Environmental Health. (2012). Drug (methamphetamine) laboratories. In R. A. Etzel (Ed.), *Pediatric Environmental Health, 3rd edition*. (pp. 737–748). Elk Grove Village, IL: American Academy of Pediatrics.
- Minnesota Department of Health. (2013). Methamphetamine and meth labs: What are the potential health effects from exposure to a meth lab? Retrieved from <http://www.health.state.mn.us/divs/eh/meth/lab/potenteffects.html>
- U.S. Centers for Disease Control and Prevention. (2000, November 17). Public health consequences among first responders to emergency events associated with illicit methamphetamine laboratories—Selected states, 1996–1999. *Morbidity and Mortality Weekly Report 49(45)* (CDC Publication No. 2001-633-173/48011 Region IV). Washington, DC: U.S. Government Printing Office. Retrieved from http://www.atsdr.cdc.gov/hs/hsees/Horton_MethLabs.pdf

7.8. Smoke in Multifamily Housing.

Requirements:

7.8.1. Smoking shall be prohibited in all indoor common areas of multifamily buildings.

7.8.2. Smoking shall be prohibited in exterior areas less than 25 feet (762 cm) from building entrances, outdoor air intakes, and operable windows.

7.8.3. Tenants and prospective tenants shall be informed in writing of any applicable smoke-free policy and the location of designated smoke-free and smoking areas. Signs shall be posted in all designated areas.

7.8.4. Tenants who terminate a lease early due to incursion of tobacco smoke or the inception of a smoke-free policy shall be exempt from early termination penalties or security deposit forfeiture.

✓ Stretch Provisions:

- A property-wide policy shall be established in consultation with current tenants to designate exterior common areas where smoking shall be prohibited and areas where smoking shall be permitted.
- A property-wide policy shall be established in consultation with current tenants to designate dwelling units where tobacco smoking shall be prohibited.

Rationale:

Tobacco smoke contains more than 7,000 chemicals, including hundreds that are toxic and approximately 70 carcinogens, such as arsenic, formaldehyde, benzene, and vinyl chloride. After smoking and radon, secondhand smoke exposure is the third-leading cause of lung cancer death. Secondhand smoke (SHS) also causes numerous health problems in infants and children, including asthma attacks, respiratory infections, ear infections, and sudden infant death syndrome (SIDS). In addition, tobacco smoking is the leading cause of fatal residential fires in the U.S. The U.S. Surgeon General has concluded that there is no safe level of exposure to SHS. Also, experts have concluded that the only way to effectively prevent the migration of SHS from the units of smokers to common areas and the units of nonsmokers is to prohibit all smoking within the building. A study in the United Arab Emirates found that incense smoke emits carbon monoxide, oxides of nitrogen, formaldehyde and carbonyls, and that incense smoke exposure causes significant lung cell inflammation. Studies show that thirdhand smoke clings to hair, skin, clothes, furniture, drapes, walls, bedding, carpets, dust, vehicles, and other surfaces, even long after smoking has stopped. Infants, children, and nonsmoking adults may be at risk of tobacco-related health problems when they inhale, ingest, or touch substances containing thirdhand smoke. Thirdhand smoke is a relatively new concept, and researchers are still studying its possible dangers.

References:

- American Cancer Society. (n.d.). Secondhand smoke. Retrieved from <http://www.cancer.org/cancer/cancercauses/tobaccocancer/secondhand-smoke>
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers. (2013). ASHRAE position document on environmental tobacco smoke . Retrieved from https://www.ashrae.org/File%20Library/docLib/About%20Us/PositionDocuments/ASHRAE_PD_Environmental_Tobacco_Smoke_2013.pdf
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- Dale, L. (2012, March 20). What is thirdhand smoke, and why is it a concern? Retrieved from <http://www.mayoclinic.com/health/third-hand-smoke/AN01985>
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Michigan: Determining the Number of Residents for Your Rental Unit

Last Updated: 1 year ago in [Property Management - Various Topics](#)

One of the most common questions asked of the RPOA staff is how many people can live in a rental unit. Well, the answer to this question is somewhat complicated and varies depending on which community the rental unit is located in Michigan.

Federal and Michigan Guidelines

The United States Department of Housing and Urban Development (HUD) publishes a guideline that is somewhat useful for determining the number of individuals you should allow to live in a single rental unit. The guideline says that, typically, you should use the “2 per bedroom plus 1 additional person” guideline. For example: If you have a one bedroom apartment, you should set the limit to three people. You’re probably asking yourself: How could all those people sleep in a one bedroom unit? Well, consider the couch/day bed/crib in the living room/den/office as an optional sleeping area or simply a crib in the bedroom where the parents are sleeping. This rule has more to do with avoiding discrimination on the basis of “familial” status than anything. BUT, be aware, if the tenant is using a Section 8 voucher, HUD has recently ordered that local Section 8 administrators should use the “2 heart beats per bedroom” restriction. In other words, no more than two people per bedroom. This has seriously limited some voucher recipient options. Where a one bedroom was sufficient prior to the new restriction, a two bedroom would not be required for the same size family.

In addition, HUD explains that other factors can be taken into account when determining the total allowable number of tenants within a single unit, such as the unit’s ability to sustain a large group of people with the existing water services. This could further limit—at the landlord’s discretion—the total allowable number of occupants. Landlords should be careful using such limitations as fair housing complaints could ratchet up.

Warning! Don’t be too quick to carve these guidelines into your granite book of rules. There are many other factors that may change the number that you “must” allow or not allow to live in a rental unit: some Federal or State, some local.

Federal and State (and most local) fair housing laws also state that you may not discriminate against families. Meaning: A landlord cannot refuse to rent to families simply because the landlord does not want to rent to families with children. Be careful when setting occupancy limits to avoid the perception of discrimination against families. A house with very large bedrooms may be able to accommodate more people. However, local occupancy restrictions under local ordinances such as property maintenance codes or zoning codes may further restrict the number of occupants allowed within a unit.

Community-by-Community Rules

Many communities have ordinances that restrict the number of occupants based upon the size of the unit, the size and number of bedrooms and the relationships of the occupants (related or unrelated persons). Even limitations on parking and the size of the lot could enter into the equation when determining the

number of occupants.

Let's take a look at the city of Grand Rapids. If you own rental property in Grand Rapids, the above HUD guideline will NOT apply.

The City of Grand Rapids has two codes which guide the number of occupants that can live in a dwelling unit—the Zoning Code and the Property Maintenance Code (PMC).

A PMC is often more straight forward than other codes or rules. The Grand Rapids PMC* simply states the number of occupants allowed per the available square footage of the entire unit AND the square footage of each bedroom. In Grand Rapids, the current PMC ordinance (as of October 24, 2014) establishes the limits for occupants as follows:

- 70 sq. ft. for the first person and an additional 50 sq. ft. for each additional person for a bedroom, e.g. the bedroom would need 190 sq. ft. for two people.
- The entire unit must have for:
 - 1-2 occupants – 120 sq. ft. of living room area plus the minimum sq. ft. required for the bedroom(s) (There is no requirement for the size of the dining area.)
 - 3-5 occupants – 120 sq. ft. of living room area plus an additional 80 sq. ft. for dining plus the minimum sq. ft. required for the bedroom(s).
 - 6 or more occupants – 150 sq. ft. of living room area plus an additional 100 sq. ft. for dining plus the minimum sq. ft. required for the bedroom(s).

Also note that for bedrooms, living and dining rooms must also meet the minimum standard dimensions for a habitable space, e.g. minimum ceiling height is 7'. (A variance is allowed in some cases where the only bedrooms in the unit are slightly less than 7'.) They must also meet the other requirements of a habitable space, i.e. window area, egress, etc.

Check with your local municipality about which PMC they are using.

** At the time of this writing, the City of Grand Rapids and City of Kentwood are using the 2012 International Property Maintenance Code.*

Zoning Code

The Zoning code is more difficult because it attempts to regulate the number of people based on “family” type. The definition of family varies within the Zoning Code—making interpretation frustrating from community to community. The zoning laws may also limit the number of parking spaces.

Building codes and other zoning ordinances may also dictate the size of the lot needed for the total square footage of a building, including set-backs. This applies more to building expansion projects and new construction. The total limit on building square footage could have a direct impact on the number of bedrooms per unit and therefore, total occupancy.

The Grand Rapids zoning code dictates the type of dwelling that can be built or maintained in a particular area of the community. A dwelling is defined as a building or portion thereof, which is used exclusively for

human habitation. Included within this definition are one-family, two-family and multiple-family dwellings, apartment, hotels, boarding and lodging houses, but not hotels, motels, motor hotels, tourist rooms or bed and breakfast operations, mobile homes or trailers, motor homes, automobile chassis, tents or portable buildings. For the purposes here, we are primarily concerned with one-family, two-family and multiple-family dwellings available for rent. The operative word in the above definition of dwelling is “family.” The zoning code further defines “family” as follows:

Family shall consist of one (1) of the following:

- (a) An individual living in a single dwelling unit.
- (b) A group of two (2) or more persons related by blood, marriage or legal adoption living in a single dwelling unit.
- (c) Not more than six (6) foster care children living in a single dwelling unit. This provision is subject to P.A. 396 of 1976 as amended (MCL 125.583b).
- (d) Not more than four (4) unrelated persons eighteen (18) years of age or older living in a single dwelling unit.
- (e) Not more than six (6) foster care adults living in a single dwelling unit. This provision is subject to P.A. 218 of 1979 as amended (MCL 400.701 to 400.737).

As you can see, paragraph (d) above would limit the number of college students living together in one unit to a total of four—unless, of course, all the students were brothers and sisters from the same biological family. (Other communities, especially “college towns,” have even stricter unrelated person limits—some as few as no more than one unrelated person. For example, if a brother and sister are sharing a rental unit while attending college, they may not be able to ask another person to live with them as the other person is unrelated to both the sister and brother—creating a two unrelated person situation.)

In addition, after looking at the above definition of family in paragraph (b), you could quickly come to the conclusion that any number of people can live in an apartment as long as they are related by blood, marriage or legal adoption. But, you would be wrong. Why? Because the Housing Code dictates the total number of persons allowed to occupy a certain unit based upon square footage. (See above.) Read the next section for more details related to the Housing Code.

Zoning laws also vary from community to community; so make sure you check out your local ordinances.

City of Grand Rapids Examples:

Okay, let’s look at two families that apply to live in a theoretical apartment with two (2) bedrooms in the City of Grand Rapids. The apartment has 750 sq. ft. of living and dining room space. Each bedroom has 120 sq. ft. of habitable sleeping area.

Family 1

The first family that applies has two married adults and two biological children. Under the Zoning Code they qualify as a family and may live in one unit. According to the Housing Code, the living area must have 120 sq. ft. No dining area is required. This particular unit meets the requirements for overall square footage.

Now we must check to see if there is enough bedroom space. The PMC requires a minimum of 70 sq. ft. in each bedroom for one person. Both bedrooms in this example meet this minimum criterion. The Code also states that there must be an additional 50 sq. ft. for each additional person sleeping in the room. In this example, there are four persons requiring a total of 120 sq. ft. in each bedroom. Since there is 120 sq. ft. in each bedroom, this family would qualify both on total square footage of the unit and square footage of the sleeping area. Two people would be allowed to sleep in each bedroom. This unit would also pass the stringent HUD two heartbeats per bedroom limit.

Family 2

The second family that applies has a total of six persons—one adult and five children, including one person that is not related by blood or adopted. There is adequate off and on-street parking. Under the Zoning Code, the family qualifies to rent this unit.

Now let's look at the PMC. The total square footage of living and dining area needed for this family is 250 sq. ft. Since our unit has 750 sq. ft., the family can still live there. But, how about the number of occupants compared to the number of bedrooms. Each of the bedrooms in this example is only 120 sq. ft. The first bedroom can accommodate two people. The second bedroom can accommodate two additional people—for a total of four. Now we have a problem. Per the Grand Rapids PMC, there is no room for the additional two occupants to sleep. So, even though the family qualifies to live in this unit by the Zoning Code and by the total square footage of the living and dining area, they are not allowed to live there because there is not enough bedroom area to accommodate the entire family. Hence, it would be illegal for you—the landlord—to rent to them.

Yes, but...

In the above example the second family was not allowed to rent the unit because there were too many people. But, don't the Federal and State laws say you can't discriminate against families? Yes, that's what the fair housing laws say; however, since the local code dictates a more stringent requirement, the landlord may deny this family tenancy.

If your community does not have a PMC or zoning code that dictates minimum square footages for occupancy, living or dining space or for bedrooms, you can apply the HUD guideline of two persons per bedroom, plus one additional person. Under this guideline, the second family in our example would still not qualify. They have more than five persons in the family. This family must rent a three bedroom home.

Other Code Issues to Be Aware Of

In some communities, there must be windows in a room in order for it to be used as a bedroom. And, those windows must be of a certain minimum size for emergency egress and ventilation reasons. You should always check with the local municipality codes to determine how many and which rooms can be used for sleeping.

How about unmarried couples living together?

In Michigan, case law has found that you cannot discriminate against unmarried couples of either sex. In Grand Rapids, zoning laws would allow the unmarried couple to co-habitat because they fall under the acceptable definition of a family as less than four unrelated individuals living together. The PMC does not address this matter whatsoever.

What about gay and lesbian couples?

There are no Federal or State laws regulating whether or not gay and lesbian couples can occupy the same rental unit. However, there are local communities that do have fair housing regulations regarding gay and lesbians. For example, Ann Arbor, Michigan does not allow discrimination based upon sexual preference. Check with your local municipality to make sure you are not discriminating in this area.

How about older children of the opposite sex sharing a bedroom?

There are no Federal or State laws that control how old and what sex children must be or can't be in order to share a bedroom. Neither the Grand Rapid's zoning nor PMC address this topic. Some communities in the State may have such a code. Be sure to check with the local appropriate city authority for details regarding this in your community.

What if there aren't any local ordinances or codes stipulating occupancy?

If your local government does not require certain occupancy limits, etc., follow the HUD guideline on page one and apply the Federal and State laws to the given situation. Never discriminate against someone from a protected class—in this case, families. And, if the tenant is receiving a Section 8 voucher, check with the administrator of the program to determine their occupancy limitations.

Final Thoughts...

Always use the local code—first— as the foundation for your policy for the number of people allowed to live in your rental units. Then apply the Federal and State laws to the circumstances. If you're worried that you still might be confused on the number of allowed occupants, contact the Rental Property Owners Association's office or the local fair housing center for guidance.

Also, if you are limiting the number of occupants and make a statement to this effect in your advertising, be sure to properly reference the code that you are using to limit this occupancy. In absence of this statement, fair housing advocates are very likely to find you in violation of fair housing laws.

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CHAPTER 17: ZONING ORDINANCE

SUBCHAPTER 17-0: INTRODUCTION

Section 17.000 Authority

These regulations are adopted under the authority granted by Sections 62.23(7), 62.231, and 87.30 of the Wisconsin Statutes.

Section 17.001 Title

This Ordinance shall be known as, referred to, and cited as the "ZONING ORDINANCE, CITY OF OCONOMOWOC, WISCONSIN" and is hereinafter referred to as the "Ordinance." This Zoning Ordinance is applicable to all territory located within the corporate limits of the City of Oconomowoc.

Section 17.002 Purpose and Intent

This Ordinance is adopted for the following purposes:

- (1) To promote land uses and development patterns that are consistent with the City's Comprehensive Plan and adopted neighborhood, corridor, or special area plans.
- (2) To promote and protect the public health, safety and general welfare of the City.
- (3) To secure safety from fire, flooding, pollution, contamination and other dangers.
- (4) To maintain and promote safe pedestrian and vehicular circulation.
- (5) To minimize congestion in the public rights-of-way through the regulation of off-street parking, maneuvering, loading and signage.
- (6) To ensure the provision of adequate open space for light, air, fire safety and recreation.
- (7) To protect environmentally sensitive areas.
- (8) To remove obstacles and provide incentives for energy conservation and renewable energy.
- (9) To promote the conservation, protection, restoration and enhancement of historic resources.
- (10) To facilitate the adequate, efficient and cost-effective provision of infrastructure and other public services and facilities.
- (11) To preserve the natural scenic beauty of the City.
- (12) To encourage reinvestment in established urban neighborhoods while protecting their unique characteristics.
- (13) To stabilize and protect property values.
- (14) To protect groundwater resources.
- (15) To prevent the overcrowding of land and avoid undue concentration of population.
- (16) To facilitate the adequate provisions of transportation, water, sewerage, and burial sites.

Section 17.003 Relationship to Comprehensive Plan

The City's Comprehensive Plan establishes the objectives, goals, and policies that serve as a basis for this Zoning Ordinance. All provisions of this Ordinance and all amendments to this Ordinance shall be consistent with the City's Comprehensive Plan as adopted and revised or updated.

Section 17.004 Interpretation and Application

This Ordinance applies to all land and land development within the jurisdictional limits of the City of Oconomowoc, Wisconsin.

- (1) No structure shall be constructed, erected, modified, converted, enlarged, reconstructed, altered, placed or maintained, and no land shall be used, modified, or maintained for any purpose or in any manner which is not in conformity with the provisions of this Chapter.
- (2) In their interpretation and application, the provisions of this Ordinance shall be held to be the minimum requirements for the promotion of the public health, safety, morals, and general welfare.
- (3) Where the conditions imposed by any provision of this Ordinance are either more restrictive or less restrictive than comparable conditions imposed by any other law, ordinance, statute, resolution or regulation of any kind, the regulations which are more restrictive or which impose high standards or requirements shall prevail, unless an exception to this provision is specifically noted.
- (4) This Ordinance does not supersede any easement, covenant or other private agreement. However, this Ordinance applies if it is more restrictive or imposes higher standards or requirements than an easement, covenant or other private agreement.
- (5) Any use, building, structure, or lot that lawfully exists at the time of the adoption of this Ordinance, or any subsequent amendment(s), may be continued, subject to the provisions of this Ordinance.
- (6) A building, structure or use that was unlawful when this Chapter was adopted does not become lawful solely by reason of the adoption of this Chapter unless said building, structure, or use is made lawful by this Chapter. To the extent that the unlawful building, structure or use conflicts with this Chapter, the building, structure or use remains unlawful under this Chapter.
- (7) In their interpretation and application, the provisions of this Chapter shall be held to be minimum requirements and shall be liberally construed in favor of the City and shall not be construed to be a limitation or repeal of any other power now possessed by the City.

Section 17.005 Zoning of Annexed Land

Pursuant to Wisconsin State Statutes, when any territory is brought into the jurisdiction of the City, by annexation or otherwise, such territory shall be deemed to be in the UR (Urban Reserve) District unless the City Council designates another zoning district at the time of annexation after review and recommendation by the Plan Commission, giving due consideration to the surrounding uses as well as the Comprehensive Plan, and provides notice that complies with the requirements of this Ordinance. The following requirements also apply to annexed land:

- (1) All lands annexed to the City after May 7, 1982 shall be subject to the Waukesha County Shoreland Zoning Ordinance in effect at the time of annexation unless the City enacts, administers, and enforces a zoning ordinance, for the annexed area, that complies with the shoreland zoning standards and that is at least restrictive as the County Shoreland Zoning Ordinance.

Section 17.006 Scope of Regulations

All buildings erected hereafter, all uses of land or buildings established hereafter, all structural alterations or relocation of existing buildings occurring hereafter, and all enlargements of or additions to existing uses occurring hereafter shall be subject to all regulations of this Ordinance which are applicable to the zoning districts in which such buildings, uses or land shall be located.

- (1) All new building sites shall meet the requirements of this Ordinance unless, prior to the effective date of this Ordinance, a building permit was issued and is still valid; provided construction is begun within one (1) year of such effective date and prosecuted to completion, said building may be:
 - (a) Completed in accordance with the approved plans on the basis of which the building permit has been issued, and,
 - (b) May upon completion be occupied as approved in the building permit by the use for which it was originally designated.
- (2) Where the City has issued a zoning approval pursuant to the provisions of this Ordinance, the approval shall become null and void unless the work thereon is underway within one (1) year of the date of issuance of such approval.

Section 17.007 Separability

- (1) In the event that any section of this Ordinance shall be declared or judged by a court of competent jurisdiction to be invalid or unconstitutional, such adjudication shall in no manner affect the other sections of this Ordinance, which shall be in full force and effect as if the said section or said sections were not originally a part thereof.
- (2) If any court of competent jurisdiction shall adjudge invalid the application of any provision of this Ordinance to a particular property, building or structure, such judgment shall not affect the application of said provision to any other property, building or structure not specifically included in said judgment.

Section 17.008 Abrogation

It is not intended that this Chapter abrogate or interfere with any constitutionally protected vested right. It is also not intended that this Chapter abrogate, repeal, annul, impair, or interfere with any existing easements, covenants, deed restrictions, agreements, rules, regulations or permits previously adopted pursuant to earlier versions of this Chapter.

Section 17.009 Transition Rules

This section addresses the applicability of new substantive standards enacted by this Ordinance to activities, actions, and other matters that are pending or occurring as of the effective date of this Ordinance.

- (1) Any application that has been filed with the City Planning Department or Building Inspector and has been determined to be fully complete by the City Planner, prior to the effective date of this Ordinance, shall be regulated by the terms and conditions of the Ordinances and Codes that were in place at the time of the filing. However, all administrative procedures and penalties shall follow those set forth by this Ordinance.
- (2) Except as noted otherwise, any application for a zoning map amendment that was filed, and has been determined to be fully complete by the City, prior to the effective date of this Ordinance, shall continue through the process to completion pursuant to the terms and conditions of the Ordinances and Codes that were in place at time of filing.
- (3) Planned development districts in force at the time of adoption of this Ordinance shall continue to be controlled under the standards of the existing planned development district. However, processes for approving or amending adopted final development plans, or site plans, shall follow the procedures of this Ordinance.
- (4) Zoning districts, use lists and definitions applicable to previously approved documents, including rezoning, planned development districts, easements, deed restrictions and similar agreements, shall remain in force.
- (5) Any application before the Zoning Board of Appeals or any application that has been filed with the Planning Department and is determined to be fully completed by August 21, 2012, prior to the effective date of this Ordinance, shall continue the process pursuant to the terms and conditions of the Ordinance that were in place at the time of filing.

Section 17.010 Repeal of Conflicting Ordinances and Effective Date

All Ordinances or parts of Ordinances in conflict with this Zoning Ordinance or inconsistent with the provisions of this Chapter, are hereby repealed to the extent necessary to give this Chapter full force and effect. This Chapter shall become effective on August 22, 2012.

SUBCHAPTER 17-1: ESTABLISHMENT OF ZONING DISTRICTS

Section 17.101 Purpose

The area located within the corporate limits of the City, being the jurisdiction of this Chapter, is hereby divided into zoning districts of such number and community character as are necessary to achieve compatibility of land uses within each district, to implement the officially adopted City Comprehensive Plan, and to achieve the purposes of this Chapter.

Section 17.102 Zoning Districts Established

In order to carry out the purposes and provisions of this Ordinance, the following zoning districts are hereby established:

Zoning District	Map Symbol
Rural Residential	RR
Suburban Residential	SR
Traditional Residential	TR
Multi-Unit (Low) Residential	RML
Multi-Unit (High) Residential	RMH
Isthmus Residential Multi	IRM
Isthmus Residential Single	IRS
General Commercial	GC
Mixed-Use Commercial	MC
Business Park	BP
Industrial	I
Urban Reserve	UR
Institutional / Public	IP

Section 17.103 Incorporation of Zoning District Map

The location and boundaries of the zoning districts are hereby established as shown on the map entitled "Official Zoning Map" on file in the office of the Zoning Administrator. The Official Zoning Map, together with all information shown thereon and all amendments thereto, shall be as much as part of this Ordinance as if fully set forth and described herein.

(1) Location of District Boundaries: The following rules shall apply with respect to the boundaries of the zoning districts as shown on the zoning district maps.

- (a) A boundary shown as following a street, alley or railroad shall be construed as following the centerline of such feature.

- (b) A boundary line shown as following a lot line, section line, survey or other property line, or municipal boundary shall be construed as following such line or boundary.
- (c) When any highway or public ground acquired or held for highway purposes is discontinued, the land where the highway or public ground is located shall belong to the owner or owners of the adjoining lands and shall be construed to be the same zoning district as the lots. If the highway or public ground is located between the lands of different owners, it shall be attached to the lots to which it originally belonged if that can be ascertained. If the lots to which the land originally belonged cannot be ascertained, the land shall be equally divided between the owners of the lands on each side of the highway or public ground.
- (d) Where any uncertainty exists as to the exact location of zoning district boundary lines, the Zoning Board of Appeals, upon written application, shall determine the location of such boundary lines.

Section 17.104 Residential Districts

- (1) General purposes of all residential zoning districts: The residential zoning districts are intended to:
 - (a) Provide appropriately located areas for residential development that are consistent with the Comprehensive Plan and with standards for public health, safety, and general welfare;
 - (b) Ensure adequate light, air, and privacy for all dwelling units with respect to density;
 - (c) Minimize traffic congestion and overloading of public services and utilities;
 - (d) Protect residential neighborhoods from incompatible uses that create excessive noise, illumination, unsightliness, odor, and smoke; and
 - (e) Create a mixture of residential uses and preserve edges and transitions between districts.
- (2) Rural Residential (RR): The RR zone is intended for development of housing at a target density of 1.0 dwelling units per gross acre. Detached single-family housing will be the predominant housing type in this zone.
- (3) Suburban Residential (SR): The SR zone is intended for development of housing at a target density of 3.0 dwelling units per gross acre. Detached single-family housing will be the predominant housing type in this zone.
- (4) Traditional Residential (TR): The TR zone is intended for development of housing at a target density of 6.0 dwelling units per gross acre. Detached single-family housing will be the predominant housing type in this zone.
- (5) Multi-Unit (Low) Residential (RML): The RML zone is intended for development of housing at a target density of 8.0 dwelling units per gross acre. Small lot single-family housing, duplexes, attached dwellings and multi-dwelling residences will be permitted housing types, subject to the density limitations of the zone

- (6) Multi-Unit (High) Residential (RMH): The RMH zone is intended for development at a target density of 12.0 dwelling units per gross acre. Multi-unit residential buildings will be the predominant housing type in this zone. RMH zoning is generally applied near heavily traveled roadways and adjacent to commercial districts.
- (7) Isthmus Residential Multi (IRM): The IRM zone is intended for development at a target density of 10.0 dwelling units per gross acre. The IRM zone is applied in the isthmus between Fowler Lake and Lac la Belle.
- (8) Isthmus Residential Single (IRS): The IRS zone is intended for development at a target density of 5.0 dwelling units per gross acre. IRS zone is applied in the isthmus between Fowler and Lac la Belle, and north of the North Lake Road bridge.

Section 17.105 Non-Residential and Other Districts

- (1) General purposes of all non-residential and other districts: The non-residential and other zoning districts are intended to:
 - (a) Provide appropriately located areas consistent with the Comprehensive Plan for retail, service, office, and industrial uses;
 - (b) Strengthen the City's economic base and provide employment opportunities close to home for residents of the City and surrounding communities;
 - (c) Provide parks, open space, and other public facilities that serve the needs of the community; and
 - (d) Minimize any negative impact of nonresidential development on adjacent residential districts.
- (2) General Commercial (GC): The GC zone is established to provide for shopping, service and office facilities adjacent to heavily traveled roadways. This district is intended to meet the convenience shopping and service needs of City residents and attract people from surrounding communities.
- (3) Mixed-Use Commercial (MC): The MC zone is established to promote a concentration of mixed uses including retail, service, office, and residential uses. The location, mix and configuration of land uses are designed to encourage convenient alternatives to the automobile, safe and attractive streetscape, and a more livable community.
- (4) Business Park (BP): The BP zone is intended for a broad range of office, light industrial uses and other complimentary uses that promote high quality new development. The purpose of this district is to permit a variety of uses that will provide professional employment within the City while at the same time providing personal and professional services to the employees working within this zoning district.
- (5) Industrial (I): The I zone is intended for industrial uses that are generally not compatible with residential development because of their operational characteristics. This district is also intended for uses that may require outdoor areas to conduct business activities or for product storage or display. The purpose of this district is to permit the normal operations of any industry that can meet and maintain compliance with established State and Federal performance standards.

- (6) Urban Reserve (UR): The district is intended to provide a transition between surrounding Town agricultural/rural residential areas on large parcels of land at a low rate of population density. This district also serves as a holding zone for recently attached or annexed properties to the City until the property is rezoned to a different zoning district.
- (7) Institutional/Public (IP): The IP Zone is intended to serve larger institutional facilities such as churches, campus, school sites and associated playgrounds, hospitals, sewer and water treatment facilities, and cemeteries. The district is for uses such as governmental services, education facilities, public parks, open space, and similar activities.

Section 17.106 Table of Allowed Uses

The Table below lists the uses allowed within all zoning districts. All uses are defined within this Zoning Ordinance. Approval of a use listed within this Table, and compliance with the applicable specific standards for use types, authorize that use only. Development or use of a property for any other use not specifically allowed in this Table and approved under the appropriate process is prohibited.

- (1) Explanation of table abbreviations:
 - (a) Permitted By-Right Uses: “P” in a cell indicates that the use is permitted by right in the respective zoning district subject to all other applicable regulations of this Zoning Ordinance including the specific standards for use types.
 - (b) Conditional Uses: “C” in a cell indicates that, in the respective zoning district, the use is allowed only if reviewed and approved with conditions in accordance with the procedures and applicable regulations of this Ordinance.
 - (c) Prohibited Uses: A blank cell indicates that the use is prohibited in the respective zoning district.
- (2) Table Organization: The Table of Allowed Uses classifies land uses and activities into general “use categories” and specific “use types” based on common functional, product, or physical characteristics, such as the type and amount of activity, the type of customers or residents, how goods or services are sold or delivered, and site conditions. This classification provides a systematic basis for assigning present and future land uses into appropriate zoning districts. This classification does not list every use or activity that may appropriately exist within the categories and specific uses may be listed in one category when they may reasonably have been listed in one or more other categories. The use categories are intended merely as an indexing tool and are not regulatory.
- (3) Classification of new and unlisted uses: The City recognizes that new types of land use will develop and forms of land use not anticipated in the Zoning Ordinance may seek to locate in the City. When application is made for a use type that is not specifically listed in the Table of Allowed Uses, the Zoning Administrator shall make a determination as to the appropriate classification of any new or unlisted form of land use in the following manner:
 - (a) The Zoning Administrator shall provide an interpretation as to the zoning district into which such use should be placed. In making such interpretation, the Zoning

Administrator shall consider the nature of the use and whether it involves dwelling activity, sales, processing, type of product, storage and amount, and nature thereof, enclosed or open storage, anticipated employment, transportation requirements, the amount of noise, odor, fumes, dust, toxic material, and vibration likely to be generated, and the general requirements for public utilities such as water, sanitary sewer and electrical.

- (b) Standards for new and unlisted uses may be interpreted as those of a similar use.
- (c) Appeals of the Zoning Administrator’s decision shall be made to the Zoning Board of Appeals following the procedures of this Ordinance.

Table of Allowed Uses														
P= Permitted C= Conditional Use		Residential						Non-Residential and Other						
Use Category	Use Type	R	S	T	R	R	I	I	G	M	B	I	I	U
		R	R	R	M	M	R	R	C	C	P		P	R
		L	H	M	S									
Residential Uses														
Household Living	Dwelling, single-family detached	P	P	P	P	P	P	P		C			C	P
	Dwelling, duplex	C	C	C	P	P	C	C		C			C	C
	Dwelling, live/work									P				
	Dwelling, multi-family	C	C	C	P	P	P			P				
Group Living	Community living arrangement (up to 8 residents)	P	P	P	P	P	P	P					P	
	Community living arrangement (9 or more residents)	C	C	C	C	C	C		C	C			P	
	Elderly housing, assisted living facility		C	C	P	P	P	C					P	
	Nursing home, hospice, life care center		C	C	C	C	C		C	C			P	
Public, Institutional, and Civic Uses														
Community and Cultural Facilities	Government admn. and civic buildings	C	C	C	C	C	C	C	P	P	P	P	P	C
	Social, fraternal lodges	C	C	C	C	C	C	C	P	P			P	
	Public safety facility	C	C	C	C	C	C	C	P	P	P	P	P	C
	Cemetery	C	C	C	C	C	C	C					P	
	Library, museum	C	C	C	C	C	C	C	P	P			P	
	Places of worship	C	C	C	C	C	C	C	P	P			P	C
Child Care Facilities	Child care center, nursery school	C	C	C	C	C	C	C	P	P	C	C	P	
	Daycare center operated by a non-profit organization	P	P	P	P	P	P	P	P	P			P	P

Table of Allowed Uses														
P= Permitted C= Conditional Use		Residential							Non-Residential and Other					
Use Category	Use Type	R	S	T	R	R	I	I	G	M	B	I	I	U
		R	R	R	M	M	R	R	C	C	P		P	R
	Daycare home, family	P	P	P	P	P	P	P					P	
Health Care Facilities	Hospital								P	P	P		P	
	Immediate care facility								P	P	P		P	
	Medical or dental office/clinic								P	P	P		P	
	Physical, occupational or massage therapy								P	P	P		P	
Parks and Open Space	Athletic fields and courts	C	C	C	C	C	C		P	P	C	C	P	P
	Community garden	P	C	C	C	C	C	C	P	P	P	P	P	P
	Open space	P	P	P	P	P	P	P	P	P	P	P	P	P
	Park	P	P	P	P	P	P	P	P	P	P	P	P	P
Educational Facilities	College or university								P	P			P	
	Elementary or secondary school								P	P			P	
Agricultural Uses														
Agriculture	Cultivation													P
Commercial Uses														
Animal Related Services	Kennel	C							C	C	C	C		C
	Veterinary clinic	P							P	P	P	P		P
	Animal Grooming	C							P	P	P	P		C
Financial Services	Bank or similar use								P	P	P	P		
	Payday loan business								C	C				
Food and Beverage Services	Bar or nightclub								P	P	C	C		
	Restaurant								P	P	P	C		
Lodging Facilities	Bed and breakfast	C	C	C	C	C	C	C	C	C			C	C
	Hotel, motel, or lodge								C	C	C			
Offices, Business and Professional	Office and similar uses								P	P	P	P	P	
Personal Services	Dry cleaning and laundry service								P	P	P	C		
	General personal services								P	P	P	C		

Table of Allowed Uses

P= Permitted C= Conditional Use		Residential						Non-Residential and Other						
Use Category	Use Type	R	S	T	R	R	I	I	G	M	B	I	I	U
		R	R	R	M	M	R	R	C	C	P	P	P	R
	Tattoo and body piercing establishments								P	P				
Recreation and Entertainment Indoor	Sexually orientated business											P		
	Art Gallery								P	P	P	C		
	Movie Theater								P	P	C			
	General Indoor Entertainment								P	P	C	P		
Recreation and Entertainment Outdoor	General outdoor recreation, commercial	C							C	C				C
	Golf course or driving range	C							C	C				C
Retail Sales	Greenhouse or nursery, commercial	C							P	P		C		C
	Grocery store								P	P				
	Liquor store								P	P				
	General Retail Sales								P	P	C	C		
Vehicles and Equipment	Parking lot/structure								P	P	P	P	P	
	Gasoline sales								C	C				
	Vehicle sales and rental								C	C				
	Vehicle service and repair								C	C	C	C		
Industrial Uses														
Industrial Service	Building materials sales								P	P	P	P		
	General industrial processing								C	C	P	P		
	Natural resource processing										C	C		C
Manufacturing and Production	Assembly										P	P		
	Manufacturing										P	P		
Warehouse and freight movement	Mini-storage								C	C	C	P		
	Storage yard								C	C		C		C
	Wholesale/distribution centers										P	P		
Telecomm	Tower/antenna of any height											C	C	C

Table of Allowed Uses														
P= Permitted C= Conditional Use		Residential						Non-Residential and Other						
Use Category	Use Type	R	S	T	R	R	I	I	G	M	B	I	I	U
		R	R	R	M	M	R	R	C	C	P		P	R
	Antenna on an existing structure	P	P	P	P	P	P	P	P	P	P	P	P	P

Section 17.107 Agricultural Use-Specific Standards

- (1) Cultivation: Cultivation uses shall meet the following requirements:
 - (a) All cultivation uses shall be setback a minimum of 15’ from all property lines when cultivation uses are located along streets that contain curb and gutter and/or storm sewer systems.

Section 17.108 Commercial Use-Specific Standards

- (1) kennel: Outdoor runs shall not be located within 100 feet of any residential zoning district.
- (2) Payday Loan or Auto Title Loan Business: Any payday loan or auto title loan business shall be located a minimum of five thousand (5,000) feet from any other payday loan or auto title loan business.
- (3) Restaurant Business: Restaurant uses shall meet the following requirements:
 - (a) Restaurants shall have a grease trap and sampling manhole unless exempted by the Oconomowoc Wastewater Treatment Manager.
 - (b) Restaurant exhaust systems are encouraged to discharge the building through venting on the building roof. Venting toward residential dwelling units shall be prohibited unless no other options are feasible.
- (4) Sexually Orientated Business: All sexually orientated businesses shall comply with Section 12.17 of the Municipal Code relating to regulations and licensing requirements.
- (5) Vehicle Service and Repair: Vehicle service bays facing a rear or side setback shall be screened from adjacent residentially zoned properties by a screening wall or fence at least six (6) feet in height. To the maximum extent feasible, the entrance to a vehicle repair bay shall not face the primary street frontage.
- (6) Drive-Through: Uses having a drive-through shall meet all of the following requirements:
 - (a) Drive-through lanes and service windows shall be located to the side or rear of the buildings, shall not be located between the principal structure and a public street , and shall be at least sixty (60) feet from the closet point to any residentially zoned property.
 - (b) The drive-through stacking shall be separated physically from the user’s parking lot and shall have a stacking area of:
 - 1. Financial Institutions 100 feet,

2. Restaurants – 100 feet,
 3. Car Washes – 100 feet
 4. Other Uses – Stacking requirements will be determined on an individual basis by the Zoning Administrator.
- (c) Drive-through speakers shall not be audible from adjacent residentially used or zoned properties.
 - (d) Drive-through canopies and other structures, where present, shall be constructed from the same material as the primary building and with a similar level of architectural quality and detailing.

Section 17.109 Industrial Use-Specific Standards

- (1) Mini-Storage: All mini-storage buildings shall be set back at least 100 feet from all right-of-ways.
- (2) Tower/Antenna of any height: All towers or antennas shall meet the following standards:
 - (a) The developer shall prepare a plan showing the number and potential locations of all antenna sites needed in the City, and within three (3) miles of the City, to complete the communication network.
 - (b) All antennas are encouraged to be constructed on existing structures, such as, but not limited to, water towers, public buildings, existing utility towers, or other communication towers.
 - (c) If it is determined that such antennas cannot be co-located on existing structures, freestanding tower structures may be permitted, but such structures shall be designed to support the proposed antennas and three (3) additional sets of communication antennas. The developer shall agree, in writing, to make the structure available for co-location by other companies of other communication equipment at a reasonable return. No more than one (1) freestanding tower structure greater than thirty (30) feet shall be permitted on a property. Multiple freestanding tower structures may be permitted on a property if the tower structure is less than thirty (30) feet in total height and the property owners obtains a conditional use permit.
 - (d) The developer may be required to post a bond or cash deposit to assure maintenance of communication equipment and its supporting structures; and to assure that if such facilities are abandoned, sufficient resources are available for the City to remove such equipment and structures.
- (3) Antenna on an Existing Structure: The Zoning Administrator may approve the location of antennas on existing structures provided that the antenna does not extend more than ten (10) feet above the highest point of the structure or is located inside a building and not visible when viewed from the exterior of the building.

Section 17.110 Accessory Uses and Structures

This Section authorizes the establishment of accessory uses that are incidental and customarily subordinate to principal uses as determined by the Zoning Administrator. An accessory use is incidental and customarily subordinate to a principal use if it complies with the standards set forth in this Section.

- (1) **Approval of Accessory Uses and Structures:** All principal uses allowed in a Zoning District shall be deemed to include those accessory uses, structures, and activities typically associated with the use, unless specifically prohibited in this Section. All accessory uses shall be subject to the standards of this Section, as well as any use-specific standards applicable to the associated principal use.
- (2) **General Standards for All Accessory Uses and Structures:** All accessory uses and structures shall comply with the general standards of this Section.
 - (a) All accessory uses and structures are subject to the dimensional requirements and development standards of the Zoning Ordinance unless stated otherwise.
 - (b) Accessory uses shall comply with all standards of this Zoning Ordinance applicable to the principal use with which they are associated. Parking requirements shall be met for both the principal use and any accessory use.
 - (c) **Same Lot:** The accessory use or structure shall be conducted and/or located on the same lot (s) as the principal use.
 - (d) **Size:** Except in non-residential districts, the maximum size of any accessory building shall be 1,000 square feet. The combined square footage of detached residential garages, carports, utility sheds, and other detached accessory buildings shall not exceed 1,000 square feet of gross building area, or 55 percent of the area calculated by multiplying the width at the principal rear yard setback times the required principal rear yard setback (whichever is less). Non-residential districts do not have a maximum size limitation.
 - (e) **Timing:** No accessory building shall be constructed until the construction of the principal building has been actually commenced, and no accessory building shall be used unless the principal building is also being used.
 - (f) **Number:** The total combined square footage of all accessory buildings on residentially zoned lots shall not exceed 1,000 square feet. The number of accessory buildings on a lot is not regulated by this Ordinance.
 - (g) **Ownership:** The principal use and the accessory use shall be under the same ownership, except for condominiums.
 - (h) **Utility Meter:** The principal use and the accessory use shall utilize the same utility meter.

Section 17.111 Additional Standards for Specific Accessory Uses and Structures

The specific standards of this Section shall apply in addition to the General Standards for all Accessory Uses and Structures. In the event of conflict, the more restrictive standards in the opinion of the Zoning Administrator shall apply.

- (1) **Home Occupation:** A home occupation may be permitted as accessory to any principal dwelling unit subject to the following standards:
 - (a) **Location:** The home occupation shall be conducted in the home or an accessory building on the same lot by a resident of the primary dwelling.
 - (b) **Size/Area:** The business or service located within the dwelling or an associated accessory shall not exceed 50 percent of the combined floor area of the structures.

- (c) Employees and Residency: The principal person(s) providing the business or service shall reside in the dwelling on the premises. There shall be no more than one (1) employee in addition to the resident(s) of the primary dwelling unit and at least one (1) additional off-street parking space shall be provided for such employee.
 - (d) Customers: Home occupations shall not serve more than one (1) client or customer at a time or no more than four (4) students at a time.
 - (e) The home occupation shall cause no change in the external appearance of the existing buildings and structures on the property.
 - (f) All vehicles used in connection with the home occupation shall be of a size, and located on the premises in such a manner, so that a casual observer or a person of normal sensibilities will not be able to detect any sign of the premises being used as a home occupation. No vehicle larger than one (1) ton shall be kept on the premises.
 - (g) The property shall contain no outdoor display or storage of goods or services that are associated with the home occupation.
 - (h) Wholesale or retail sales of goods shall not occur on the premises.
 - (i) The home occupation shall not create traffic or parking congestion, noise, vibration, odor, glare, fumes, or electrical or communications interference that can be detected by the normal senses off the premises, including visual or audible interference with radio or television reception.
 - (j) Prohibited Home Occupations: The following uses, because of their impacts on the surrounding residential area, shall not be permitted as home occupations: auto repair or motorized implement repair; dance, music or other type of instruction (if more than four (4) students are being instructed at one time); the painting of vehicles, trailers or boats; private schools with organized classes; motor vehicle towing operation; barber or beauty shops having more than one (1) chair; welding shops; nursing homes; and other such transient lodging; or any other home occupation that, in the sole opinion of the Zoning Administrator, will have negative impacts on the neighborhood.
- (2) Outdoor Seating Areas Accessory to Food and Beverage Uses: Primary access to the area shall be from within the establishment. Outdoor seating areas accessory to food and beverage uses are permitted to operate from 7:00 am to 11:00 pm seven (7) days per week upon issuance of a permit.
- (3) Outdoor Display of Goods and Sales: Outdoor display and/or sales may be allowed as an accessory use for all commercial uses and shall be located on private property. It is the intent of this Ordinance to allow the display of merchandise for sale, but not where the display of such items impedes the flow of pedestrian or vehicular traffic or creates an unsafe condition. The display of goods shall meet all of the following requirements:
- (a) Vending Machines: Outdoor vending machines are prohibited.
 - (b) Outdoor display and/or sale shall require approval of the Zoning Administrator. All new development plans must show the location of such areas in accordance

with this Section. Existing non-residential uses must submit a plan showing the location of the outdoor display or sales areas and how the requirements of this Section are to be met. Approval may be subject to appropriate conditions by the Planning Department.

(c) Where Permitted:

1. Unless approved otherwise by the Zoning Administrator, all outdoor display of goods shall be located immediately adjacent to the storefront and not in drive aisles, loading zones, fire lanes, or parking lots.
 2. The area used for outdoor display or sales shall not occur on the sides and rear of buildings and shall be limited to no more than one-quarter of the length of the storefront, unless increased by the Zoning Administrator after taking into account aesthetic and safety concerns or other relevant factors. In the case of a shopping center, the "storefront" shall include the entire frontage of the shopping center, meaning that the total amount of display for all the in-line tenants combined shall not exceed 25 percent of the aggregate store front of the overall shopping center.
 3. No goods shall be attached to a building's wall surface.
 4. The height of the outdoor display shall not exceed six (6) feet, unless an exception to this provision has been granted by the Zoning Administrator.
 5. The outdoor display area shall take place on an improved surface such as a private sidewalk or pavement.
 6. No outdoor displays shall be allowed in required landscape areas.
- (4) No pedestrian obstruction. At least five (5) feet along the parking lot side of the display area shall be maintained free of obstruction to allow for pedestrian and handicap movement, such that handicapped pedestrians and others do not have to enter the parking lot or drive aisle to walk around the display.
- (5) Outdoor Storage in Non-Residential Districts: Outdoor storage may be allowed as an accessory use through the plan review process and subject to compliance with the following requirements:
- (a) Each outdoor storage area shall be incorporated into the overall design of the primary structure on the site and shall be located at the rear of the primary structure.
 - (b) Each outdoor storage area shall be screened from view from all property lines and adjacent right-of-ways by an opaque fence or wall that incorporates at least one (1) of the predominant materials and one (1) of the predominant colors used in the primary structure. The fence shall be of the appropriate height that all outdoor storage areas are effectively screened. Materials may not be stored higher than the height of the primary structure. A landscaped earthen berm may be used instead of or in combination with a required fence or wall.
 - (c) No materials may be stored in areas intended for vehicular or pedestrian circulation.
 - (d) Refuse Disposal Area: All developments providing a refuse disposal area shall be screened on four (4) sides (including a gate for access) by a solid,

commercial-grade wood fence, wall, or equivalent material with a minimum height of six (6) feet and not greater than seven (7) feet.

- (e) Outdoor Storage Areas: Outdoor storage areas shall be screened from abutting residential uses with a building wall or solid, commercial-grade wood fence, wall, year-round hedge, or equivalent material, with a minimum height of six (6) feet and not greater than seven (7) feet.

(6) Outdoor Storage in Residential Districts:

- (a) All materials and equipment shall be stored within a completely enclosed building except for the following which shall not be located within any front yard or street yard and shall be stored a minimum of five (5) feet from any and all property lines: firewood, construction materials, and landscaping materials, equipment related to onsite construction.
- (b) Recreational equipment including, but not limited to, boats, snowmobiles, all terrain vehicles, travel trailers, pop-up campers, and motor homes, shall be stored or parked a minimum of five (5) feet from any and all property lines and shall not be located within any front yard or required street yard unless parked on a designated driveway parking space.

(7) Donation Drop-Off Boxes: Donation drop-off boxes are prohibited on all public and private property except under the following circumstances:

- (a) Donation drop-off boxes are allowed on property where the primary structure is used by a not for profit organization, as defined by the Wisconsin Statutes, and the box is used exclusively to support said organization.
- (b) The drop box must meet all required setbacks and placed in a buildable area in a side or rear yard and screened from view of any public right-of-way.
- (c) All donations must be fully enclosed in a donation drop-off box. Donations that are not fully enclosed in a donation drop-off box are considered a public nuisance and subject to removal by the City.

(8) Swimming Pool Standards:

- (a) Swimming pools shall be erected and constructed in rear or side yards only and only on a lot occupied by a principal building. No swimming pools shall be erected or constructed on an otherwise vacant lot.
- (b) All swimming pools shall be at least ten (10) feet from any lot line or building.
- (c) All pool filters (including pumps) shall be at least twenty (20) feet from any lot line or buildings on the adjacent property.
- (d) Non-seasonal pools shall meet the following enclosure requirements:
 - 1. All outdoor, in-ground swimming pools shall have a fence or other solid structure not less than four (4) feet in height completely enclosing the pool with no opening therein (other than doors or gates) larger than three (3) inches square. All gates or doors opening through the enclosure shall be kept securely closed and locked at all times when not in actual use and shall be equipped with a self-closing and self-latching device designed to keep

and be capable of keeping such door or gate securely locked at all times when not in actual use.

2. All outdoor, above-ground pools shall have an approved barrier consisting of a wall of durable material of which the pool itself is constructed and shall extend directly above the vertical water enclosing wall of the pool. Such walls shall extend not less than four (4) feet above the level of the ground immediately adjacent to the pool. Such a pool wall barrier shall not be located within six (6) feet of any other wall or fence or other structure which can be readily climbed by children. Every entrance to a pool, such as a ladder, must be secured or adequately safeguarded to prevent unauthorized entry into the pool.

(9) Play Structures and Play Houses:

- (a) Seasonal play structures shall be exempt for the requirements set forth in this Section but shall comply with the accessory structure setback requirements of the applicable zoning district.
- (b) Play structures shall not exceed fifteen (15) feet in height.
- (c) A play house shall not have a footprint area exceeding 100 square feet or a height greater than ten (10) feet. Any play house exceeding these dimensions shall be considered an accessory structure and shall be subject to all ordinances governing accessory structures. Play houses with electric or plumbing are prohibited.
- (d) Play houses shall not be used as a yard maintenance building. No more than one (1) play house shall be allowed on any residential property.
- (e) Play structures and play houses shall not be located in front/street yard setbacks.
- (f) Play houses and play structures shall comply with the accessory structure setback requirements of the applicable zoning district.

Section 17.112 Temporary Uses and Structures

This Zoning Ordinance allows for the establishment of certain temporary uses for limited duration, provided that such uses comply with the general and specific standards of this Section. The following temporary uses are allowed:

- (1) A dwelling unit situated on a lot, parcel, or tract, along with a primary dwelling unit, that provides a temporary residence for the residents of the associated primary dwelling unit that has been deemed uninhabitable due to fire, flood, or other disaster, or is under construction or undergoing substantial repairs or reconstruction. The temporary residence is allowed on the lot, parcel or tract only while the primary residence is undergoing new construction or repair. A temporary dwelling unit may also include a residence located on a nonresidential construction site and occupied by persons having construction or security responsibilities over such construction site. The temporary residence shall be removed from the lot, parcel, or tract upon completion of such construction.

- (2) Retail sales of products, including but not limited to Christmas trees, nursery products, or agricultural produce, or special event celebrations in any district for a period not to exceed the number of days specified in the temporary use permit. Display of products need not comply with the setback requirements of this Zoning Ordinance provided that no display shall be located within a right-of-way or restrict the vision clearance requirements.
- (3) Temporary office space and equipment storage when accessory to an approved construction project, including sales offices on residential development sites. Such uses shall be located on the site no more than 30-days prior to the start of construction and removed no more than 30-days after completion of such project, or in the case of sales offices on residential development sites, removed when all houses or units are sold or leased.
- (4) Yard Sales: A yard sale shall not exceed four (4) days in duration, and no more than one (1) sale shall be held in any two (2) month period. Yard sales are not required to obtain a temporary use permit.
- (5) The use of portable storage structures in residential districts are allowed without permit under the following conditions
 - (a) There shall be no more than one (1) portable storage structure per property.
 - (b) The portable storage structure shall be no larger than ten (10) feet wide, twenty (20) feet long, and ten (10) feet high.
 - (c) A portable storage structure shall not remain at a property in excess of sixty (60) days.
 - (d) The portable storage structure shall be setback a minimum for five (5) feet from all property lines.
 - (e) The portable storage structure shall be setback a minimum of five (5) feet from the nearest wall of a building.
 - (f) The portable storage structure shall be placed on a paved surface.
 - (g) Portable storage structures associated with a site where a building permit has been issued, are permitted for the duration of construction and shall be removed from the site within fourteen (14) days of the end of construction. Portable storage structures associated with construction are exempt from the aforementioned conditions.
- (6) Expansion or replacement facilities, consisting of transportable buildings that are pre-constructed and arrived at the site ready for occupancy and are readily removed and installed at other sites. Such facilities may include, but are not limited to, the following:
 - (a) Expansion of existing religious assembly facilities, health care facilities, and government offices following the approval of filed plans and applications for the permanent alteration/expansion of these facilities.
 - (b) Temporary classroom space for existing schools.
 - (c) Temporary office space for construction and security personnel during the construction of an approved development for which building permits have been issued.

- (d) Temporary space for recreational uses provided in connection with an approved residential development under construction.
- (e) Temporary office space (one per site) for hiring, membership solicitation, apartment office/leasing, and general office use following the issuance of a building permit for the construction of a permanent office building.

Section 17.113 General Requirements for All Temporary Uses and Structures

All temporary uses or structures shall meet the following general requirements, unless otherwise specified in this Zoning Ordinance:

- (1) The temporary use or structure shall not be detrimental to property or improvements in the surrounding area or to the public health, safety, or general welfare.
- (2) Permanent alterations to the site related to the temporary use or structure are prohibited unless completed in conjunction with Section 17.113(1).
- (3) If the property is undeveloped, it shall contain sufficient land area to allow the temporary use or structure to occur, as well as any parking and traffic circulation as required that may be associated with the temporary use, without disturbing sensitive or protected natural resources, including required buffers, 100-year floodplains, and required landscaping.
- (4) If the property is developed, the temporary use shall be located in an area that is not actively used by an existing approved principal use, and that would support the proposed temporary use without encroaching or creating a negative impact on an existing buffer, open space, landscaping, traffic movements, pedestrian circulation, or parking space availability.
- (5) Tents and other temporary structures shall be located so as not to interfere with the normal operations of any permanent use located on the property, shall be anchored, and meet the requirements of the Building Inspector, and Fire Inspector.
- (6) Off-street parking shall accommodate the proposed temporary use as determined by the Zoning Administrator.

Section 17.114 Shoreland Regulations.

All lands annexed to the City after May 7, 1982 shall be subject to the Waukesha County Shoreland Zoning Ordinance in effect at the time of annexation unless the City enacts, administers, and enforces a zoning ordinance, for the annexed area, that complies with the shoreland zoning standards and that is at least restrictive as the County Shoreland Zoning Ordinance. In addition to any other applicable use, site, or restrictions and regulations, the following regulations shall apply to all shorelands.

- (1) Tree Cutting and Shrubbery Clearing. Tree cutting and shrubbery clearing within 100 feet of the ordinary high water mark of all navigable waters is prohibited except for home site development (house pad, patio, retaining wall, deck, and similar areas); park site development; access roads; path and trail construction; timber stand improvement; customary trimming; dead tree removal; and managed timber harvesting under a State District Forester's Plan. Such tree cutting and shrubbery clearing shall not involve the clear cutting of more than 30 feet in any 100 feet, as measured along the ordinary high water mark, and shall be so regulated as to prevent erosion and sedimentation, preserve and improve scenic qualities, and

during foliation substantially screen any development from stream or lake users. Paths and trails shall not exceed ten (10) feet in width and shall be so designed and constructed as to result in the least removal and disruption of shoreland cover and the minimum impairment of natural beauty.

- (2) Earth Movements, such as construction, altering or enlargement of waterways, removal of stream or lake bed materials, channel clearing, dredging, lagooning, grading, topsoil removal, filling, road cutting, ditching, and soil and water conservation structures require Department of Public Works approval.

Section 17.115 Municipal Well Recharge Area (MW) Overlay Zoning District

The City recognizes that consequences of certain land use activities, whether intentional or accidental, can seriously impair groundwater quality. The purpose of the Municipal Well Recharge Area Overlay District (MW) is to protect municipal groundwater resources from certain land use activities by imposing appropriate restrictions upon lands located within the approximate groundwater recharge area of the City's municipal wells. The restrictions imposed herein are in addition to those of the underlying zoning districts or any other provisions of the zoning Chapter.

- (1) MW Overlay Zones: The Municipal Well Recharge Area Overlay District is indicated by MW on the Well Recharge Area Map. The MW zone is identified as the primary source of water for the municipal well aquifer and as the area most likely to transmit groundwater contaminants to the municipal wells. Each required municipal well shall have a MW zone defined by a Wellhead Protection Plan (WHPP). The MW zone to be protected shall encompass the recharge area equivalent to a five (5) year time of travel or 1,200 feet at a minimum.
- (2) Map: The locations and boundaries of the Recharge Area Overlay Zoning District established by this Chapter are set forth on the adopted Well Recharge Area Map.
- (3) MW Land Use Regulations: The following land use regulations are in addition to the land use regulations established by the basic Zoning District(s) provided by the remainder of this Chapter:
- (4) Separation Distance Requirements: Potential sources of contamination shall be physically separated from municipal wells subject to the MW Recharge Overlay Districts. The separation distances as specified in Chapter NR section 811 of the Wisconsin Administrative Code shall be maintained.
- (5) Existing Uses – Separation Distance Requirements:
 - (a) Existing uses shall provide copies of all current, revised or new federal, state, and locally facility operation approvals, permits, or certificates; operational safety plans; and on-going environmental monitoring results to the City Utility.
 - (b) Existing uses shall devise, maintain and keep current a contingency plan detailing how they intend to respond to any emergency which may cause or threaten to cause environmental pollution that occurs at their facility, including notifying municipal, county, and state officials. The contingency plan shall be filed with the Utility.
 - (c) Existing uses shall be treated as nonconforming uses subject to the restrictions on such uses set forth in this Ordinance and Wisconsin Statutes.

- (d) Existing uses shall not engage in or employ a use or activity prohibited within its area of the applicable Overlay District which they did not engage in or employ at the time they became an existing use.

(6) Additional Land Use Regulations for the MW Overlay District

- (a) All storage water shall be retained on site.
- (b) All above ground petroleum product storage tanks shall provide leak proof containment equal to 125% of the tank volume.
- (c) Bulk liquid pesticide, insecticide, fungicide, or fertilizer storage in excess of 55 gallons is prohibited except in containment areas not less than 125% of the volume of the largest container.

SUBCHAPTER 17-2: Performance Standards

Section 17.200 Intensity and Bulk Requirements

All primary and accessory structures are subject to the dimensional, bulk and performance standards set forth within this Section. These general standards may be further limited or modified by other applicable sections of this Zoning Ordinance.

Section 17.201 Measurements and Exceptions

(1) Density:

- (a) Residential Densities: The City regulates residential development primarily by density rather than minimum lot size. Density is calculated based on gross acres. Within the density limits of each residential district, a variety of housing types and lot sizes are permitted. This approach allows more sites to be developed with flexibility.
- (b) Dwelling Units Allowed: The number of dwelling units allowed on a site is based on the presumption that all other applicable standards of this Zoning Ordinance shall be met. The maximum density established for a Zoning District is not a guarantee that such densities may be obtained, nor valid justification for varying or modifying other dimensional or development standards.

(2) Setbacks:

- (a) A building, structure, or lot shall not be developed, used, or occupied unless it meets the minimum setback requirements for the Zoning District in which it is located, except as otherwise established in this Zoning Ordinance or unless a variance, special exception, or other modification has been granted. Setbacks shall be measured from the property line.
- (b) Setbacks shall be unoccupied and unobstructed by any structure or portion of a structure from 30-inches above grade upward; provided, however, that fences, non-structural walls, trellises, poles, posts, ornaments, furniture, and other customary yard accessories may be permitted in any setback subject to height limitations and requirements limiting obstruction of visibility.

(3) Projections into Required Setbacks, General – The following structures may project into required front, side, or rear setbacks as specified in this Section:

- (a) Paved Terraces: Paved terraces may project into any required setback, provided that no structures placed there shall violate other requirements of this Zoning Ordinance and are at least five (5) feet from the lot line.
- (b) Unroofed Landings, Decks, Stairs and Balconies: Unroofed landing, decks, and stairs may project into required setbacks, provided that no portion other than a handrail shall extend higher than 30-inches above the finished grade level. Unroofed landings, decks, and stairs greater than 30-inches may project into the required side or rear yard provided these projections are at least five (5) feet from the property line. Unroofed balconies may project into a required side or rear yard provided these projections are at least five (5) feet from the property line.

- (c) Incidental Architectural Features: Cornices, eaves, canopies, sunshades, gutters, chimneys, flues, headers, sills, pilasters, lintels, ornamental features and other similar architectural features may project into a required setback provided these projections are at least three (3) feet from the property line.
 - (d) Roofs Over Porches and Other Exterior Approaches: Roofs over porches, stairways, landings, terraces, or other exterior approaches to pedestrian doorways may encroach up to five (5) feet into a front setback. The covered porch or entrance area encroaching into the setback shall remain exterior to the building and enclosed by no more than a railing.
 - (e) Projections Into Easements and Right of Ways Prohibited: Projections shall not extend or encroach into any public or private easements or right(s)-of-way unless approved by the Zoning Administrator and the holder of the easement.
 - (f) Handicap Ramps: Handicap access ramps may be located within required front, side, and rear setbacks.
 - (g) Flagpoles: Flagpoles are permitted intrusions into all required yards. The minimum setback shall be a distance from the property line equal to one-half of the height of the pole.
 - (h) Solar Equipment: Solar equipment may be located within required front, side, and rear setbacks, and shall not be located closer than five (5) feet to any property line.
 - (i) Charging Stations: Electric vehicle charging stations may be located within required front or side setbacks, and shall not be located closer than five (5) feet to any property line.
- (4) Projections into Required Shoreland Setbacks: The following may project into required shoreland setbacks as specified by this Section provided the intrusion is constructed and maintained in a manner that avoids or minimizes adverse impacts to the shoreline:
- (a) Pedestrian walkways, provided the amount of impervious surface is the minimum reasonably necessary to provide access to the shoreline.
 - (b) Facilities for public access to the water and public water-enjoyment recreational uses.
 - (c) Utilities which are located underground and are accessory to shoreline use.
 - (d) Bio-retention swales, rain gardens, and other similar bio-retention systems that allow filtration of water through vegetation.
 - (e) Uncovered decks and patios provided:
 - A. No part of the structure exceeds 30-inches above the existing grade, and protrudes more than fifteen (15) feet into the required shoreland setback.
 - B. Materials used for construction are pervious, or allow water to easily pass through to the ground (e.g. wood decking with gaps between the board and pervious ground surface below).

- C. Total surface area of all decks, patios, and similar improvements inside of the setback area does not exceed 300 square feet.
 - (f) Outdoor fire pits, picnic tables, benches and similar recreational features.
- (5) Setback Averaging, Front Setback: Where at least fifty percent (50%) of the front footage of any block is built up with principal structures, the minimum front yard setback for new structures shall be the average setback of the existing principal structures on the block face or the normal setback requirement in the district whichever is less, but no less than ten (10) feet. Setback averaging shall not apply for properties zoned Mixed-Use Commercial. For the purpose of calculating the average setback:
- (a) If the setback of an existing structure is greater than the required setback, the required setback shall be used.
 - (b) Setback averaging applies only to front yard setbacks; side yards on corner lots shall not be included.
 - (c) Projections into setbacks shall not be included in averaging.
 - (d) Setback reductions approved by variance or special exception shall not be included.
 - (e) If a block face is at least seventy-five (75%) built, a vacant lot on the block face shall not be included.
- (6) Double-Frontage Lots: In the case of double-frontage lots, front yard setbacks shall be provided on all street frontages. Accessory structure construction is permitted on the non-driveway street frontage provided front/street yard setbacks are met.
- (7) Building Height:
- (a) Height Requirements: No building shall be erected or altered that will exceed the height limit for the respective Zoning District.
 - (b) Height Exceptions for Appurtenances: The height limitations contained in this Zoning Code do not apply to cupolas, flagpoles, spires, church belfries, chimneys, solar energy equipment, antennas, heating and ventilation equipment, stairwell towers or similar appurtenances, provided, however, the following:
 1. The appurtenance does not interfere with Federal Aviation Regulations;
 2. The appurtenance does not extend more than ten (10) feet above the maximum permitted building height, except for church belfries, and antennas that must be of greater height in order to function but shall not exceed 90 feet unless a conditional use permit is granted.
 3. Flagpoles: No flagpole shall exceed a height of 25 feet on all residentially zoned parcels and 40 feet on all non-residentially zoned parcels.
 4. The appurtenance is not constructed for the purpose of providing additional floor area to the building;
 5. The appurtenance complies with the screening requirements for mechanical equipment and appurtenances;

6. The appurtenance is functional.

Section 17.202 Residential Intensity and Bulk Requirements

<i>Lot</i>	<i>RR</i>	<i>SR</i>	<i>TR</i>	<i>RML</i>	<i>RMH</i>	<i>IRS</i>	<i>IRM</i>
Density (maximum dwelling units per acre)	1.0	3.0	6.0	8.0	12.0	5.0	10.0
Width (min ft.)	150'	70'	50'	90'	100'	50'	100'
<i>Yards</i>							
<i>Principal Structure / Attached Garage (min ft)</i>							
Front / Street	30'	20'	20'	20'	20'	20'	20'
Side	15'	7'	7'	10'	10'	7'	10'
Rear	50'	20'	20'	20'	20'	---	---
Shoreland	75'	75'	75'	75'	75'	45'	45'
<i>Accessory Structure (min ft)</i>							
Front	Not Permitted in front yard						
Side	10'	3'	3'	3'	3'	3'	3'
Rear	20'	5'	5'	5'	5'	---	---
Shoreland	75'	75'	75'	75'	75'	45'	45'
<i>Height</i>							
Principal Structure (max ft)	35'	35'	35'	35'	45'	35'	35'
Accessory Structure (max ft)	25'	15'	15'	15'	15'	15'	15'
<i>Paved Surface Setback (min ft)</i>							
Side	3'	3'	3'	3'	3'	3'	3'
Rear	5'	5'	5'	5'	5'	5'	5'

Section 17.203 Residential Design Standards

The following standards apply to all new development in the residential districts.

- (1) **Main Entrances:** Main Entrances must be prominent and oriented to the street in front of the dwelling.
- (2) **Attached Garages:** One (1) attached garage is permitted provided it meets one of the following requirements:
 - (a) One (1) attached garage with street-side garage wall not exceeding 50% of the width of the principal structure provided:
 1. The garage meets the minimum yard setback requirement of the principal structure.

2. The garage area does not exceed 1,000 square feet or the total ground floor area of the dwelling unit.
 3. The street side garage wall does not extend more than twelve (12) feet in front of the street-side façade of the dwelling unit.
 4. Side-loaded garages are not required to meet the above standards but shall conform to the required district setbacks and not exceed 1,000 square feet. The street-side garage wall shall contain a minimum of two (2) windows that have a similar architectural style as the dwelling's windows.
- (b) One (1) attached garage with street-side garage wall exceeding 50% of the width of a principal structure but not exceeding 65% of the width of the principal structure provided:
1. The garage meets the minimum yard setback requirements of the principal structure.
 2. The garage area does not exceed 1,000 square feet or the total ground floor area of the dwelling unit.
 3. The street side garage wall does not extend more than six (6) feet in front of the street-side wall of the dwelling unit.
 4. The principal structure includes a second story street-side wall that is at least the width of the longest ground floor street-side wall of the dwelling unit and includes street facing windows and/or balcony higher than the garage.
 5. The dwelling unit includes a street-side covered porch of not less than 48 square feet and extending at least as close to the street as the street-side wall of the garage.
 6. Side-loaded garages are not required to meet the above standards but shall conform to the required district setbacks and not exceed 1,000 square feet. The street-side garage wall shall contain a minimum of two (2) windows that have a similar architectural style as the dwelling's windows.
- (c) One (1) attached garage with street-side garage wall exceeding 65% of the width of a principal structure but not exceeding 70% of the width of the principal structure provided:
1. The garage meets the minimum yard setback requirements of the principal structure.
 2. The garage area does not exceed 1,000 square feet or the total ground floor area of the dwelling unit.
 3. The street-side garage entrance on corner lots or through lots may face a street other than that of the main entrance to the dwelling unit, if not see below.
 4. If both the garage and the entrance of the dwelling unit face the same street or corner lots, then:
 - a. The street side garage wall shall not extend in front of the longest street-side wall of the dwelling unit.

- b. The principal structure shall include a second story street-side wall that is at least the width of the longest ground floor street-side wall of the dwelling unit.
 - c. The street facing garage side wall shall have street facing windows.
- (3) Conversions from Single-Family Homes to Duplexes: When a single-family house is to be used as a dwelling for two-families, any staircases that are added outside of the exterior of the existing structure shall only be added on the rear façade, not on façades visible from the street.

Section 17.204 Isthmus Design Standards

The following standards apply to all properties zoned IRM and IRS. All development, façade and building changes shall reflect building scale, design, configuration, details, exterior material, and colors which:

- (1) Reflect the practices common in the period between 1870 and 1930.
- (2) Complement other instances of similar development in the Isthmus districts which are consistent with the historic theme.
- (3) Modern forms of development which do not conform to the above two (2) standards shall not be permitted even if they reflect other examples of development which do not conform to these standards which are already present in the Isthmus districts. Where necessary, the Zoning Administrator or Architectural Commission may seek the opinion of experts to determine the degree to which proposed development reflects the above two (2) standards.

Section 17.205 Non-Residential Intensity and Bulk Requirements

Lot	GC	MC	BP	I	UR	IP
Density (maximum dwelling units per acre)					0.1	8.0
Width (min ft.)	100'	25'	100'	100'	100'	100'
Maximum Lot Coverage	75%	100%	75%	90%	30%	60%
Yards						
Principal Structure / Attached Garage (min ft)						
Front / Street	15'	0'	15'	15'	30'	20'
Side	20'	0'	20'	20'	15'	20'
Rear	20'	0'	20'	20'	50'	20'
Shoreland	75'	45'	75'	75'	75'	75'
Accessory Structure (min ft)						
Front	Not Permitted in front yard					
Side	6'	0'	6'	6'	20'	3'
Rear	10'	5'	10'	10'	20'	5'
Shoreland	75'	45'	75'	75'	75'	75'
Height						
Principal Structure (max ft)	50'	70'	50'	50'	35'	50'
Accessory Structure (max ft)	15'	15'	15'	15'	25'	15'
Paved Surface Setback (min ft)						
Side	3	0	3	3	3	3
Rear	5	0	5	5	5	5

Section 17.206 Design Standards for all Non-Residential Districts

- (1) **Screening of Site Elements:** The following site elements shall be screened to be compatible with the design elements, materials, and colors used elsewhere on the site as follows:
- Loading Areas:** Loading areas shall be screened from abutting residential uses and from street view to the extent feasible by landscaping, a building wall or solid, commercial-grade wood fence, or equivalent material, with a minimum height of six (6) feet and not greater than seven (7) feet.
 - Mechanical Equipment:** All rooftop and ground level mechanical equipment, with the exception of solar equipment, shall be fully screened from view from any street or residential district as viewed from six (6) feet above ground level. Screening may consist of a building wall or fence and/or landscaping as approved by the Zoning Administrator. Screens shall be of durable, permanent materials that are compatible with the primary building materials. Screening for rooftop mechanical equipment shall incorporate similar architectural features of

the building and/or constructed of a material and color compatible with other elements of the building. Exterior mechanical equipment, such as ductwork, shall not be located on primary building facades, unless approved by the City.

Section 17.207 Commercial and Mixed-Use Design Standards

This section is intended to promote high-quality commercial and mixed-use building design, encourage visual variety in non-residential areas of the City, foster a more pedestrian scale and attractive street fronts, project a positive image to encourage economic development in the City, and protect property values of both the subject property and surrounding areas. Development of any structure that will contain a commercial use shall comply with the general standards of this Section.

(1) Sitting: The sitting of the building shall:

- (a) Reflect, rather than obscure natural topography.
- (b) Enable significant or important trees to be preserved as determined by the City Planner.
- (c) Be compatible with the original structure, when the structure is an addition to an existing structure.

(2) Building Orientation: Local climatic conditions shall be considered when orienting buildings. For example, north-facing facades are especially susceptible to winter snow and ice accumulation, and entries may require special treatment. Snow piling zones along street shall be considered in arranging building elements on the site. Adequate solar access shall be considered when planning outdoor spaces, with shade and relief from glare provided by landscaping and overhead structures.

(3) Street Corners: Buildings located on street corners shall recognize the importance of their location by:

- (a) Concentrating tallest portions of the building at the intersection where they may “frame” the corner;
- (b) Employing architectural features, such as angled façades, prominent entrances, a stepped parapet wall, or other unique building features at the corner; or
- (c) Employing a similar technique as approved by the Zoning Administrator.

(4) Pedestrian Environment:

- (a) Site design shall locate pedestrian routes connecting residential, recreational, and commercial uses to minimize contact with normal vehicular traffic. This can be achieved by designing crossings at traffic stop points, and/or by announcing crossings with signage, pavement changes, and landscape features.
- (b) Pedestrian use can be increased by the addition of amenities such as benches, drinking fountains, planters, trash receptacles, path lighting, and bicycle racks.
- (c) When existing sidewalks, curbs, gutters, or other public improvements have deteriorated, the development shall be required to replace and/or repair the public amenities.
- (d) When sidewalks exist or are proposed, new development should be sited and designed to encourage pedestrian activity.

- (5) **Building Massing and Form:** Unless otherwise provided in this Zoning Ordinance, building form may vary widely, as long as certain features of building form are considered:
- (a) Within the development, variability in size and shape of buildings shall occur.
 - (b) Incorporating pedestrian-scale features at the ground level will help encourage pedestrian use. Examples include articulated entries and window canopies, arcades, recessed entries, changes in color, material, or texture.
 - (c) Façade modulation shall be utilized to reduce the apparent bulk of a large building, where applicable.
 - (d) Large, unbroken expanses and long, continuous rooflines shall be avoided.
- (6) **Building Materials:**
- (a) A wide range of exterior building materials is acceptable, including but not limited to wood, brick and stone. Materials appearing to derive from local natural settings are encouraged.
 - (b) Metal-sided buildings are prohibited, except concealed fasteners, pre-finished metal, and architectural metal panels. Metal roofing is acceptable. Metal wainscot treatments not exceeding four (4) feet in height are acceptable.
- (7) **Architectural Style:** The architectural character of new buildings or additions shall complement the architectural character of adjacent existing buildings.
- (8) **Four-Sided Design:** All building façades shall be designed with a similar level of design detail. Blank walls void of architectural detailing shall not be permitted. Exceptions may be granted in those areas of the building envelope that the applicant can demonstrate are not visible from adjacent development, public rights-of-way, trails, lakes, etc.
- (9) **Entrance Visibility:** Entrances shall be clearly delineated and visible from the street.
- (a) Buildings should be designed with delineated and unobstructed entries accessible from adjacent streets, as opposed to entries accessible only from parking lots.
 - (b) When entries cannot be located adjacent to the street, delineated and unobstructed pathways using building and landscape elements should enhance building entries.

Section 17.208 Additional Standards: Mixed-Use Commercial District

These standards are intended to preserve and enhance the unique character and identity of Downtown Oconomowoc and ensure that future infill and redevelopment is consistent with City plans. A high-quality appearance will be achieved through requirements for context-sensitive site layouts, architectural detailing, façade articulation, and other features designed to provide a more distinct character and pedestrian scale. Development of any structure that is located within the Mixed-Use Commercial District shall comply with the standards of this Section.

- (1) **Site Planning:**

- (a) Primary Entrances: Primary entrances shall be orientated from the primary street frontage.
- (b) Parking Location: Surface parking shall be located behind buildings. Surface parking will not be permitted between the building and the primary street frontage or to the side of the building where it may be viewed from the primary street frontage. Design standards for properties and development located on Fowler Lake and Lac La Belle will be reviewed by the Plan Commission on a case-by-case basis.
- (c) Ground-Floor Uses: The incorporation of retail shops and/or restaurants is encouraged at the street level to promote a more active environment for pedestrians and to support residential and office uses located within the same building or nearby. This configuration of uses is particularly encouraged along Wisconsin Avenue and Main Street, where a high level of activity and visibility is desirable.
- (d) Front/Street Setback: First floors of all buildings within Mixed-Use Commercial District shall “build to” the back of the sidewalk or edge of the property. Exceptions to the build-to line may be permitted if:
 - 1. The space is set back from the build-to line is used for outdoor gathering space;
 - 2. The space set back from the build-to line is designed as a protected walkway for pedestrians, with the second floor placed at the build-to line; or
 - 3. The space set back from the build-to line is used to provide a mid-block pedestrian connection to an outdoor gathering space provided at the rear of the building to Fowler Lake or Lac la Belle.

(2) Building Considerations:

- (a) Building Articulation: The perceived mass and scale of downtown development shall be reduced to achieve a pedestrian scale. This shall be accomplished by incorporating a series of smaller design elements that are consistent with the development’s architectural character. Appropriate design elements for every development shall incorporate, but are not limited to, at least four (4) of the following:
 - 1. Variations in roof form and parapet heights;
 - 2. Pronounced recesses and projections;
 - 3. Wall plane off-sets;
 - 4. Off-sets to accommodate outdoor gathering spaces;
 - 5. Distinct changes in texture and color of wall surfaces;
 - 6. Ground-level arcades and second or third-floor galleries/balconies;
 - 7. Protected and recessed entries; and
 - 8. Vertical accents or focal points.

(3) Building Design and Character:

- (a) Materials: Primary building materials shall be durable and project an image of permanence typical of the Downtown traditional masonry storefronts. Appropriate materials include, by are not limited to:
 - 1. Brick, stone, or other masonry products;
 - 2. Steel (may be used for accents only);
 - 3. Cast concrete;
 - 4. Split face concrete masonry (not to exceed 40% of the exterior wall area);
 - 5. Composite siding; or
 - 6. Comparable material approved by the Zoning Administrator.
- (b) Color:
 - 1. Color schemes shall reflect the building's specific use and architectural period while maintaining a unified appearance with adjoining buildings.
- (c) Awnings:
 - 1. Awnings shall be designed as integral elements of the building façade. Material, configuration, dimension, and location of awnings shall be appropriate for the building.
- (d) Street Level Transparency: Unless waived by the Zoning Administrator, a fifty percent (50%) minimum of the total area of each ground-floor building façade that faces a street, plaza, park, or other public space, shall be comprised of transparent window openings to allow views of interior spaces and merchandise, to enhance the safety of public spaces by providing direct visibility to the street, and to create a more inviting environment for pedestrians. Such openings shall be taller than they are wide.

Section 17.209 Large Scale Development Standards

Large scale development buildings subject to this Section shall incorporate the following features along no less than 60% of their horizontal length in a manner determined sufficient by the Zoning Administrator:

- (1) Arcades.
- (2) Windows for vision, display, or daylighting.
- (3) Customer entrances in addition to the requirements listed below.
- (4) Awnings, canopies, or porticos.
- (5) Outdoor patio or other community feature, such as pedestrian plazas with benches, window shopping walkways, outdoor playground areas, information kiosks, water features, planter walls, public art, or other deliberately shaped areas or features that enhance community and public spaces.
- (6) Building façades shall include a repeating pattern that includes no less than three (3) of the following elements:
 - (a) Color change.
 - (b) Texture change.
 - (c) Material module change.

- (d) Expression of architectural or structural bay through a change in plane no less than 24-inches in width, such as an offset, reveal or projecting rib.
 - (e) At least one (1) of the above elements shall repeat horizontally. All elements shall repeat at intervals of no more than 30 feet, either horizontally or vertically.
- (7) Rooflines shall be varied with a change in height at least every 75 linear feet in the building length.
- (8) Roofs shall have features such as:
- (a) Parapets, gable roofs, hip roofs, or dormers that would be used to conceal rooftop equipment from public view. Parapets shall feature three-dimensional cornice treatments.
 - (b) Overhanging eaves that extend no less than three (3) feet past the supporting walls.
 - (c) Three (3) or more roof slope planes, with varying lengths and designs.
- (9) Materials and Color: Any façade that is visible from a public street or adjacent property shall be constructed of high quality materials, including, but not limited to brick, wood, stone, tinted and textured concrete masonry units. Exterior insulation and finish system (EIFS) shall not be used on the lower three (3) feet of any façade and shall not exceed 30% of the exterior wall area of a building.
- (10) Large scale development shall have a clearly defined, highly visible customer entrance featuring no fewer than three (3) of the following:
- (a) Canopies or porticos.
 - (b) Overhangs.
 - (c) Recesses/projections.
 - (d) Arcades.
 - (e) Raised corniced parapets over the door.
 - (f) Display windows.
 - (g) Peaked roof forms.
 - (h) Arches.
 - (i) Outdoor patios.
 - (j) Architectural details, such as tile work and moldings that are integrated into the building.
 - (k) Integral planters or wing walls that incorporate landscaped areas and/or places for sitting.
- (11) Large buildings shall feature “four-sided architecture” so that all sides will have a finished public view and there shall be full screening of all mechanical equipment.
- (12) Developer shall submit a traffic impact analysis (TIA) drafted by a professional traffic engineer addressing traffic impact created, or affected by, the large scale development. All recommendations listed in the TIA shall be installed by the developer.

- (13) Parking lots shall be designed to incorporate internal greenspace islands throughout the parking areas. A minimum of 10% of the overall asphalt area shall be internal greenspace islands.
- (14) Parking lots exceeding 1,000 stalls shall be reviewed and approved by the Wisconsin Department of Natural Resources prior to approval by the City.
- (15) Stormwater management plans shall be designed by a professional engineer and reviewed and approved by the City Engineer.
- (16) Outside display or sales of products shall not encroach into the parking lots of the development.
- (17) Outside storage of bulky items shall only be allowed in the rear of the building and with proper screening as determined by the City.
- (18) A trash and debris program shall be submitted as part of the application, addressing how the applicant intends on keeping the site in a clean, orderly, and trash and debris-free condition.
- (19) If located abutting a residentially zoned property, no customer service entrance or parking stall shall be permitted within 100 feet of a residentially zoned property.
- (20) All dumpsters shall be located within the established building setback distances and shall be screened with materials similar to the principal building materials.

Section 17.210 Multi-Family and Duplex Design Standards

The purpose of these standards is to ensure that multi-family and duplex developments exhibit creativity and variety in design features. These standards shall be applicable to all multi-family and duplex development.

(1) Site Planning:

- (a) Building Orientation: The primary entrance and façade of individual buildings within a multi-family or duplex development shall be oriented towards:
 - 1. Primary internal or perimeter streets, or
 - 2. Common open space, such as interior courtyards, parks, or on-site natural areas or features with a clearly defined and easily accessible pedestrian circulation system.
- (b) Pedestrian Connections: An on-site system of pedestrian walkways shall be designed to provide direct access and connections to and between the following:
 - 1. The primary entrance or entrances to each multi-family or duplex building;
 - 2. To any sidewalks or walkways on adjacent properties that extend to the boundaries shared with the multi-family or duplex development;
 - 3. Any sidewalk system along the perimeter streets adjacent to the multi-family or duplex development;
 - 4. Any adjacent commercial land uses, including but not limited to retail shopping center, office buildings, restaurants, or personal service establishments; and

5. Any adjacent or on-site public park, trail system, open space area, greenway, or other public or civic use including but not limited to schools, places of worship, public recreational facilities, or government offices.

(c) Garage Placement and Design

1. General: The use of alley or side-loaded garages, or the use of a combination of garage orientations is encouraged where practicable.
2. Freestanding Common Garages, Carports, Parking Lots
 - a. To the maximum extent feasible, garage entries, carports, and parking lots, shall be internalized in building groupings or located away from street frontages.
 - b. Parking lots and freestanding common garages and carports shall not occupy more than 30 percent of each perimeter public street frontage.
 - c. To the maximum extent practicable, freestanding common garages and carports that are visible from perimeter public streets shall be sited perpendicular to the perimeter street in order to reduce visual impacts on the streetscape.
 - d. Freestanding common garages and carports shall be limited to 60 feet in length unless second-floor residential units are incorporated above them, in which case they shall be limited to 80 feet in length.
 - e. Detached common garages and carports shall incorporate compatible materials, scale, colors, architectural details, and roof slopes similar to those of the primary multi-family or duplex building.
3. Front-Loading Garages
 - a. Garage doors on all front-loading (street-orientated) garages shall be either:
 1. Recessed a minimum of four (4) feet behind the front façade of the dwelling portion of the structure (including side-loading garages), or a front porch that is a minimum of five (5) feet wide by eight (8) feet long; or
 2. Recessed a minimum of two (2) feet beneath a second floor bay.
 - b. A straight run of more than two (2) garage doors (street orientated) is not permitted. Banks of more than two (2) garage doors must be interrupted by an entry to the building or architectural feature.

(2) Building Design

- (a) Four-Sided Design: All sides of a multi-family building shall display a similar level of quality and architectural detailing. The majority of a building's architectural features and treatments shall not be restricted to a single façade. Building details, including roof forms, windows, doors, trim, and siding materials, shall reflect the architectural style of the building.

- (b) Façade Articulation: Blocky, uniform facades are prohibited. The façades of all multi-family buildings shall be articulated through the incorporation of three (3) or more of the following:
 - 1. Balconies;
 - 2. Bay or box windows;
 - 3. Insets or other relief in the wall plane;
 - 4. Porches;
 - 5. Dormers;
 - 6. Variation in materials; or
 - 7. Variations in roof forms.
- (c) Roof Form: The incorporation of a variety of roof forms is strongly encouraged.
- (d) Multi-Building Developments: Multi-family developments with more than three (3) buildings shall incorporate more than one (1) distinction among building designs.

Section 17.211 Outdoor Lighting

The purpose of this Section is to regulate the spill-over of light and glare on operators of motor vehicles, pedestrians, and land uses in the vicinity of a light source in order to promote traffic safety and to prevent the creation of nuisances. All exterior lighting for any type of residential or nonresidential development shall comply with the standards of this Section unless exempted:

- (1) Existing lighting: All lighting existing prior to the adoption of this Section shall be brought into compliance with this Section upon reconstruction or remodeling of more than a cumulative 50 percent of floor area of such building, facility or additions.
- (2) Lighting Plan Requirement: The submission of an exterior lighting plan is required prior to the approval of a site plan to promote a standard illumination that is unified in design, color, intensity, and fixtures. The plan shall describe such things as the light source, level of illumination, pole height, fixture details, hours of illumination, and the orientation. Single and two-family dwellings are not required to submit a lighting plan.
- (3) Exempt Lighting: The following types of lighting are exempt from the requirements of this Section:
 - (a) Soffit or wall-mounted luminaries that are permanently attached to single-family residential dwellings, not to exceed the height of the eave.
 - (b) Public street and right-of-way lighting.
 - (c) Temporary decorative seasonal lighting.
 - (d) Temporary lighting for emergency work and construction.
 - (e) Temporary lighting for theatrical, television, and performance areas, or for special events authorized by the City.
 - (f) Lighting required and regulated by the Federal Aviation Administration.

- (g) Lighting for outdoor recreational uses such as ball diamonds, playing fields, tennis courts, and similar uses, provided that such uses comply with the following standard:
 - 1. Lighting shall be extinguished no later than 11:00 pm unless approval is granted by the Zoning Administrator.
- (4) Prohibited Light Sources: The following light fixtures and sources shall not be used where the direct light emitted is visible from adjacent public areas and adjacent properties.
 - (a) Mercury vapor light sources;
 - (b) Searchlights and other high-intensity narrow beam fixtures, except for accent lighting.
- (5) Design Requirements: Outdoor lighting shall primarily be used to provide safety while secondarily accenting key architectural elements to emphasize landscape and building features. Light fixtures shall be designed as an internal design element that complements the design of the project. This may be accomplished through style, material or color. All lighting fixtures designed or placed so as to illuminate any portion of a site shall meet the following requirements:
 - (a) Fixture (Luminaries): All light sources shall be concealed or shielded with luminaries with cut-offs with an angle not exceeding 90 degrees to minimize the potential for glare and unnecessary diffusion on adjacent property.
 - (b) Fixture Height: Lighting fixtures shall be a maximum of 30 feet in height (including base) within parking areas and shall be a maximum of 15 feet in height within non-vehicular pedestrian areas.
 - (c) Light Source (Lamp): Lighting with a similar color temperature shall be used for similar types of lighting on any one site throughout any development.
 - (d) Light Spill/Trespass: If light trespasses onto adjacent property, house-side shields shall be used on light fixtures adjacent to residential zoned property to prevent glare, light spill, or trespass.
- (6) Specific Lighting Standards:
 - (a) Building Mounted Lighting: Building mounted security light fixtures such as wall packs shall not project above the fascia or roof line of the building and shall be full cut-off. Building mounted fixtures shall not be substituted for parking area or walkway lighting and shall be restricted to loading, storage, service and similar locations.
 - (b) Accent Lighting: Only lighting used to accent architectural features, buildings, landscaping or art may be directed upward, provided that the fixture shall be located, aimed or shielded to minimize glare and light spill into the night sky.
 - (c) Canopy Area Lighting: All developments that incorporate a canopy area over fuel sales, automated teller machines or similar installations shall use flat lens, full cutoff fixtures.
 - (d) Parking Area Lighting: A minimum of 0.5 foot-candle of illumination is required on the parking surface, drive lanes and loading zones.

(e) Excessive Illumination:

1. Any lighting used to illuminate off-street parking areas shall be down lit away from residential properties and public streets in such a way as not to create a nuisance.
2. Lighting shall not be orientated so as to direct glare or excessive illumination onto streets in a manner that may distract or interfere with the vision of drivers.
3. All outdoor light not necessary for security purposes shall be reduced, activated by motion sensor detectors, or turned off during non-operating hours.

(f) Intensity of Illumination:

1. Adjacent to Residential Zoned Property: In no instance shall the amount of illumination attributable to exterior lighting, as measured at the property line, exceed 0.50 footcandles above ambient lighting conditions on a cloudless night.
2. Adjacent to Non-Residential Zoned Properties: For non-residential zoned property adjacent to non-residential zoned properties, in no instance shall the amount of illumination attributable to exterior lighting, as measured at the property line, exceed 3.00 footcandles above ambient lighting conditions on a cloudless night.
3. Non-Residential Zoned Properties Adjacent to Right-of-Way: For non-residential zoned property adjacent to right-of-way, in no instance shall the amount of illumination attributable to exterior lighting, as measured at the property line, exceed 1.20 footcandles above ambient lighting conditions on a cloudless night, provided, however, that the lighting on the non-residential zoned property, when combined with the roadway lighting, does not create a traffic hazard because of illumination and/or glare on operators of motor vehicles.

Section 17.212 Noise Standards

The purpose of this Section is to regulate the creation of noise which adversely affects adjoining properties in order to prevent the creation of nuisances and to promote the general welfare of the public.

- (1) Prohibited Acts: It shall be unlawful for any person to willfully or negligently make or continue any loud or unusual noise which disturbs the peace and quiet of any neighborhood or which causes any discomfort or annoyance to any reasonable person of normal sensitivities residing in the area. The factors used to make a determination that this Ordinance has been violated include the following:
 - (a) The sound level of the objectionable noise;
 - (b) The character and typical environmental noise of the surrounding area;
 - (c) The proximity of the noise to residential areas;
 - (d) The nature and zoning of the area where the noise originates;
 - (e) The number of persons affected by the noise;

- (f) The time of day or night the noise occurs;
 - (g) The duration of the noise; and
 - (h) Whether the noise is instantaneous, intermittent or perpetual.
- (2) Maximum Permissible Sound Levels: No person, business, or institution shall conduct or permit any activity that produces a dB(A) beyond their property line exceeding the levels specified below. Where property is used for both residential and commercial purposes, the residential sound levels shall be used only for measurements made on the portion of the property used solely for residential purposes. Sound measurements shall be made at or inside the property line of the person complaining of excessive noise. The measurement shall be taken from five (5) feet above the ground or floor level:
- (a) Impulsive Noise:
 - 1. Residential district – 60 dB(A) from 10:00 p.m. to 7:00 a.m. and 70 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 2. Commercial and Institutional districts – 70 dB(A) from 10:00 p.m. to 7:00 a.m. and 80 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 3. Industrial and Urban Reserve districts – 80 dB(A) from 10:00 p.m. to 7:00 a.m. and 90 dB(A) from 7:00 a.m. to 10:00 p.m.
 - (b) Intermittent Noise:
 - 1. Residential district – 55 dB(A) from 10:00 p.m. to 7:00 a.m. and 60 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 2. Commercial and Institutional districts – 60 dB(A) from 10:00 p.m. to 7:00 a.m. and 65 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 3. Industrial and Urban Reserve districts – 70 dB(A) from 10:00 p.m. to 7:00 a.m. and 75 dB(A) from 7:00 a.m. to 10:00 p.m.
 - (c) Continuous Noise:
 - 1. Residential district – 45 dB(A) from 10:00 p.m. to 7:00 a.m. and 50 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 2. Commercial and Institutional districts – 50 dB(A) from 10:00 p.m. to 7:00 a.m. and 55 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 3. Industrial and Urban Reserve districts – 55 dB(A) from 10:00 p.m. to 7:00 a.m. and 60 dB(A) from 7:00 a.m. to 10:00 p.m.
 - (d) Perpetual Noise:
 - 1. Residential district – 45 dB(A) from 10:00 p.m. to 7:00 a.m. and 50 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 2. Commercial and Institutional districts – 50 dB(A) from 10:00 p.m. to 7:00 a.m. and 55 dB(A) from 7:00 a.m. to 10:00 p.m.
 - 3. Industrial and Urban Reserve districts – 55 dB(A) from 10:00 p.m. to 7:00 a.m. and 60 dB(A) from 7:00 a.m. to 10:00 p.m.

- (3) Limited Exemptions: The following uses or situations shall have limited exemptions from the noise standards of this Subchapter:
- (a) Construction Noise: No person shall use construction equipment on buildings or construction sites between the hours of 7:00 p.m. and 7:00 a.m. In all events, any and all noise resulting from activity involving the use of construction equipment in a residential area shall be measured from the property line on which the work is being conducted.
 - (b) Commercial Power Equipment: No person shall use commercial power equipment in residential areas between the hours of 7:00 p.m. and 7:00 a.m.
 - (c) Residential Power Equipment: Power equipment intended for frequent use in residential areas may be used at a reasonable time and in a reasonable manner so as not to offend the peace and quiet of persons of ordinary sensibilities. In all events, any and all residential power equipment used within, or adjacent to, a residential area shall be limited to use between the hours of 7:00 a.m. and 9:00 p.m.
 - (d) Loading and Unloading: Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, or similar objects between the hours of 10:00 p.m. and 7:00 a.m. in such a manner as to cause a noise disturbance across a residential property line shall be prohibited.
- (4) General Exemptions: The following activities are exempted from the requirements of this Section:
- (a) Emergency work necessary to restore property to a safe condition following fire, accident, or natural disaster; to restore public utilities; or to protect persons or property from an imminent danger.
 - (b) Sound to be made to alert persons to the existence of an emergency, danger or attempted crime.
 - (c) Activities or operations of governmental units or agencies.
 - (d) Parades, concerts, festivals, fairs, or similar activities, subject to the any sound limits established in the approval by the City and approved by the appropriate City Departments. .
 - (e) Athletic, musical, or cultural activities or events (including practices and rehearsals) conducted by or under the auspices of public or private schools.

Section 17.213 Non-Residential Snow Storage

Adequate space for snow storage shall be provided on a site plan and approved by the Zoning Administrator. Snow storage areas shall not utilize designated parking stalls or public right-of-way unless approved by the Zoning Administrator.

Section 17.214 Fence/Wall Standards

Fences and/or walls may be erected or maintained in any yard along or adjacent to a lot line in accordance with the requirements of this Section. The owner shall be responsible for properly locating all property lines before construction of the fence. The following requirements apply to all fences and walls exceeding thirty (30) inches in height:

- (1) Materials:

- (a) Residential Districts: Acceptable materials for constructing fencing and walls include wood, stone, brick, wrought iron, chain link, wire mesh, and any other materials determined to be similar by the Zoning Administrator. Wire mesh fencing is not permitted within required front yard or street yard areas. Any fence within a street yard, including along property lines which intersect a right-of-way, shall be a maximum of 50% opaque.
 - (b) Nonresidential Districts: Acceptable materials for constructing fencing or walls include wood, stone, brick, wrought iron, chain link, and wire mesh. Barbed wire fencing is permitted on security fencing at heights equal to or greater than seven and one-half feet (90"). Any fence within a street yard, including along property lines which intersect a right-of-way, shall require review by the Zoning Administrator to ensure consistency with the character of the development and surrounding neighborhood.
 - (c) Temporary Fencing: Temporary fencing, including the use of wood or plastic snow fences for the purposes of limiting snow drifting between November 1 to April 1, protection of excavation and construction sites, and the protection of plants during grading and construction is permitted for up to 180 consecutive days and no more than 180 consecutive days.
- (2) Location: On all properties, no fence or wall shall be located closer than one (1) foot to the front yard or street yard property line. Fences may be located no closer than one (1) inch from any property line abutting a side or rear yard.
 - (3) Maximum Height: The maximum height of any fence or wall shall be the following:
 - (a) Four (4) feet when located within a required front yard or required street yard on any property;
 - (b) Six (6) feet when located on any residentially zoned property, but not within a required front yard or required street yard; and
 - (c) Eight (8) feet when located on any nonresidential zoned property, but not within a required front yard or required street yard, except security and screening fences may exceed this height if approved by the Zoning Administrator.
 - (4) Orientation: Any and all fences or walls between different land uses shall be erected so as to located visible supports and other structural components towards the most intensive land use as determined by the Zoning Administrator.
 - (5) Maintenance: Any and all fences or walls shall be maintained in a structurally sound and attractive manner.

SUBCHAPTER 17-3: TRAFFIC, PARKING, AND ACCESS

Section 17.301 Purpose

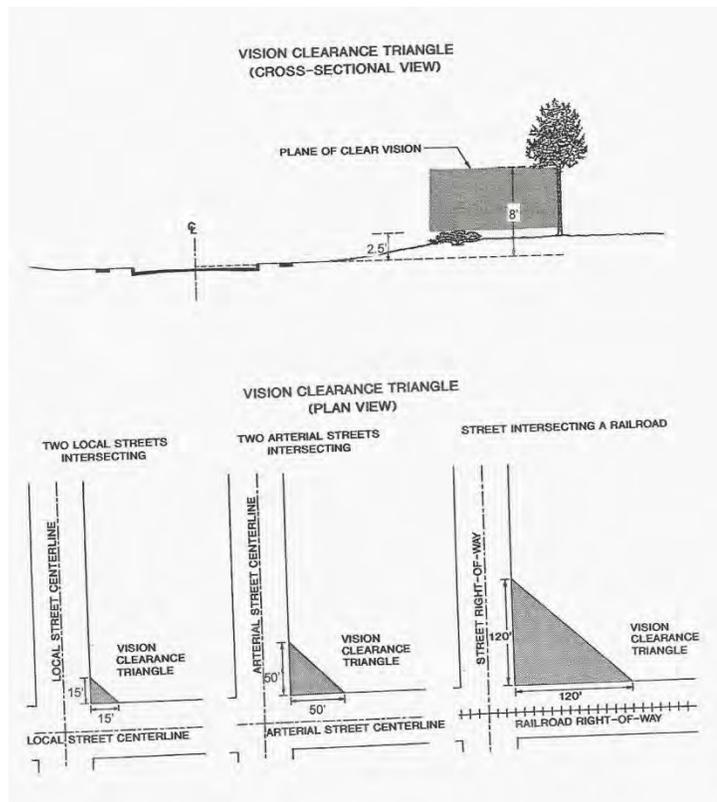
The purpose of this Subchapter is to provide the requirements for access, visibility, off-street parking, and off-street loading for all development occurring within the City.

Section 17.302 Visibility Standards

The purpose of this Section is to alleviate and prevent congestion of public rights-of-way so as to promote the safety and general welfare of the public by establishing minimum requirements for the provision of vehicular visibility.

- (1) **Requirement:** In order to provide a clear view of intersecting streets to motorists there shall be a triangular area of clear vision at the intersection of any two streets; or the intersection of a street and a railroad.

- (a) No obstructions, such as structures, parking, or vegetation, shall be permitted in any district between the heights of 30 inches (2 ½ feet) and 8 feet above the plane through the mean curb grades within the triangular space formed by any two (2) existing or proposed intersecting street or alley rights-of-way lines and a line joining points on such lines located a minimum of 15 feet from their intersection as measured along the property lines. In establishing the vision triangle, the planned or ultimate right-of-way lines shall be used. This requirement may be waived by the City Planner on a case-by-case basis to enhance site designs.



- (b) In the Case of Arterial Streets intersecting with any other street, the corner cutoff distances establishing the vision triangle clearance space shall be increased to 50 feet.

- (2) **Depiction on Required Site Plan:** Any and all visibility triangles located on a property proposed for development or redevelopment shall be depicted on the site plan required for the development of the property.

Section 17.303 Parking and Loading Standards

These requirements are intended to establish orderly, safe, and efficient vehicular parking, circulation and access on adjoining thoroughfares within developments. The off-street parking and loading standards on this Section shall apply to all parking lots and parking structures accessory to any building constructed and to any use established in every district. The requirements of this section shall apply to all temporary parking lots and parking lots that are the principal use on a site. The off-street parking and loading standards of this Section apply when an existing structure or use is expanded or enlarged, or when there is a change in use. Additional off-street parking and loading spaces shall be required to serve the enlarged or expanded area of the new use, provided that in all cases the number of off-street parking and loading spaces provided for the entire use (pre-existing plus expansion) must equal 100 percent of the minimum ratio established in this Section.

- (1) **Off-Street Parking Requirements:** Properties zoned mixed commercial (MC) are exempt from off-street parking requirements. Unless otherwise expressly stated in this Zoning Ordinance, off-street parking spaces shall be provided as stated below:

Off-Street Parking Requirements Schedule A		
("du" = dwelling unit; "sf" = gross square feet)		
Use Category	Use Type	Number of Spaces Required
Residential Uses		
Household Living	All use types not listed below	2/du
	Dwelling, multi-family	1.5/du for one bedroom units 2/du for all other units All projects shall provide 0.25 guest spaces per unit
Group Living	Community living arrangement (up to 8 residents)	1 per two beds plus 1 per 100 sf of assembly area
	Community living arrangement (9 or more residents)	1 per two beds plus 1 per 100 sf of assembly area
	Elderly housing, assisted living facility	1 per four beds, based upon maximum capacity
	Nursing home, hospice, life care center	1 per four beds, based upon maximum capacity
Public, Institutional, and Civic Uses		
Community and Cultural Facilities	Government admn. and civic buildings	1/300 sf
	Social, fraternal lodges	
	Public safety facility	
	Library, museum	
	Places of worship	
Child Care Facilities	Child care center, nursery school	1 per 400 sf, and 1 additional space, reserved for pickup and delivery of children per 800 sf. Parking requirements of principal use shall be met if daycare use is accessory
	Daycare center in school or religious inst.	

Off-Street Parking Requirements Schedule A

("du" = dwelling unit; "sf" = gross square feet)

Use Category	Use Type	Number of Spaces Required
Health Care Facilities	Hospital	1 per two beds, based on maximum capacity, plus 1 per 300 sf of office and administrative area, plus required parking for supplemental uses
	Immediate care facility	1/300 sf
	Medical or dental office/clinic	
	Physical, occupational or massage therapy	
Parks and Open Space	All use types	See Schedule C. Playfields (soccer, baseball, etc.) shall have a minimum of 20 spaces per field
Educational Facilities	College or university	1/300 sf of enclosed floor space
	Elementary or secondary school	1 per six seats in the main auditorium or assembly room, based on maximum capacity, or 1.25 per classroom, whichever is greater
Commercial Uses		
Animal Related Services	All use types	1/300 sf
Financial Services	All use types	1/300 sf (plus stacking spaces if drive-thru is provided)
Food and Beverage Services	All use types not listed below	1/200 sf
	Restaurant, with drive-through	1/300 sf
Lodging Facilities	Bed and Breakfast	1 per guestroom
	Hotel, motel, or lodge	1 per guestroom, plus 1 per 90 sf of meeting or lounge area, plus any supplemental uses
Offices, Business and Professional	All use types	1/300 sf
Personal Services	All use types	1/300 sf
Recreation and Entertainment Indoor	Sexually orientated business	1/300 sf
	Art Gallery	1/300 sf
	Movie Theater	1 per 4 seats
	General Indoor Entertainment	1/300 sf

Off-Street Parking Requirements Schedule A

("du" = dwelling unit; "sf" = gross square feet)

Use Category	Use Type	Number of Spaces Required
Recreation and Entertainment Outdoor	General outdoor recreation, commercial	1 per 5,000 sf of land area, or 1 per 3 persons capacity (maximum), whichever is greater; playfields (soccer, baseball, etc.) shall have minimum of 20 spaces per field
	Golf course or driving range	Golf course: 4 per green Driving range: 1 per tee
Retail Sales	Greenhouse or nursery, commercial	See schedule B
	Grocery store	
	All other uses	1/300 sf
Vehicles and Equipment	Gasoline Sales	1 per 1,000 sf. of floor area
	Vehicle sales and rental	See schedule B
	Vehicle service and repair	
Industrial Uses		
Industrial Service	All use types	1 per 2 employees
Manufacturing and Production	All use types	1 per 2 employees
Warehouse and freight movement	Mini-storage	1 per 50 units, plus 1 per 300 sf of office area, plus vehicle stacking spaces for security gate. Aisles suitable for temporary loading and unloading may be counted as required parking stalls.
	All other uses	See schedule B
Telecommunications	Tower/antenna of any height	None
Accessory Uses		
Home Occupation		1/du in addition to spaces required for the dwelling

- (2) Schedule B: Uses included in Off-Street Parking Schedule B, shall provide the minimum number of off-street parking spaces listed in the table below. Unless otherwise approved, lots containing more than one (1) activity shall provide parking and loading in an amount equal to the total of the requirements for all activities.

Off-Street Parking Schedule B	
Use	Number of Spaces Required
Offices	1 per 300 square feet
Indoor sales area	1 per 250 square feet
Outdoor sales or display area (3,000 square feet or less)	1 per 750 square feet

Outdoor sales or display area (over 3,000 square feet)	1 per 2,000 square feet
Indoor storage/warehousing/vehicle service/manufacturing area	
1 – 3,000 square feet	1 per 300 square feet
3,001 – 5,000 square feet	1 per 650 square feet
5,001 – 10,000 square feet	1 per 750 square feet
10,001 – 50,000 square feet	1 per 1,250 square feet
50,001 square feet or more	1 per 1,500 square feet

- (3) Schedule C: Uses that reference “Schedule C” have widely varying parking and loading demand characteristics, making it impossible to specify a single off-street parking and loading standard. Upon receiving an application for a use subject to Schedule C standards, the Zoning Administrator shall apply the off-street parking and loading standard specific for the listed use that is deemed most similar to the proposed use or establish minimum off-street parking requirements on the basis of a parking and loading study prepared by the applicant. Such a study shall include estimates of parking demand based on recommendations of the Institute of Transportation Engineers (ITE), or other acceptable estimates as approved by the Zoning Administrator, and should include other reliable data collected from users or combinations of uses that are the same as or comparable with the proposed use. Comparability will be determined by density, scale, bulk, area, type of activity, and location. The study shall document the source of data used to develop the recommendations.
- (4) **Maximum Number of Spaces Permitted**: For any use categorized as “Commercial” or “Industrial” in the “Off Street Parking Requirements” table, off-street parking spaces shall not be provided in an amount that is more than 125 percent of the minimum requirements established in this Ordinance. Exceptions to this requirement includes:
- (a) If application of the maximum parking standard would result in less than six (6) parking spaces, the development shall be allowed six (6) parking spaces.
 - (b) For the purpose of calculating parking requirements, the following types of parking spaces shall not count against the maximum parking requirements, but shall count toward the minimum requirement:
 1. Accessible parking
 2. Vanpool and carpool parking
 3. Structured parking, underground parking, and parking within, above, or beneath the building(s) it serves.
 - (c) Exceptions to the maximum parking requirements may be allowed in situations that meet all of the following criteria as determined by the Zoning Administrator:
 1. The proposed development has unique or unusual characteristics such as high sales volume per floor area or low parking turnover, which create a parking demand that exceeds the maximum ratio and which typically does not apply to comparable uses.

2. The parking demand cannot be accommodated by on-street parking, shared parking with nearby uses, or by increasing the supply of spaces that are exempt from the maximum ratio.
3. The request is the minimum necessary variation from the standards.
4. If located in a mixed-use development, the uses in the proposed development and the site design are highly supportive of the mixed-use concept and support high levels of existing or planned transit and pedestrian activity.
5. Phased construction of parking areas that exceed the maximum parking requirements is encouraged to ensure the maximum amount of parking necessary is constructed.

(5) Computation of Parking and Loading Requirements:

- (a) Fractions: When measurements of the number of required spaces result in a fractional number, any fraction shall be rounded up to the next higher whole number.
- (b) Multiple Uses: Lots containing more than one (1) use shall provide parking and loading in an amount equal to the total of the requirements for all uses.
- (c) Area Measurements: Unless otherwise specified, all square footage-based parking and loading standards shall be computed on the basis of gross floor area of the use in question. Structured parking within a building shall not be counted in such measurement.
- (d) Computation of Off-Street Parking: Required off-street loading space shall not be included as off-street parking space computation of required off-street parking space.
- (e) Parking for Unlisted Uses: Parking requirements for uses not specifically listed within this Section shall be determined by the Zoning Administrator based on the requirements for the closest comparable use, as well as on the particular parking demand and trip generation characteristics of the proposed use. The Zoning Administrator may alternatively require the submittal of a parking demand study that justifies estimates of parking demand and includes relevant data collected from uses or combinations of uses that are the same or comparable to the proposed use in terms of density, scale, bulk, area, type of activity, and location.

(6) Parking Area Layout and Design:

- (a) Stall Dimensions
 1. Parking stall and aisle dimensions shall be measured from the middle of the stall stripe of a parking stall to the middle of the adjacent stall stripe. Aisles for two-way flows shall be a minimum of 24 feet, except when no spaces are backing onto the aisle, in which case the width shall be 20 feet.
 2. Accessible parking shall comply with the requirements of the International Building Code.

3. The following standards may be used as guidelines for the design of indoor and outdoor parking stalls. Deviations from these standards may be approved by the Zoning Administrator on a case-by-case basis:

Design of Parking Stalls (Minimum)				
Type of Stall	Parking Angle	Stall Width	Stall to Curb	Aisle Width
Passenger Vehicle	0°	8'	8'	12'
Passenger Vehicle	45°	9'	19'	13'
Passenger Vehicle	60°	9'	20'	13'
Passenger Vehicle	90°	9'	18'	24'
Handicapped Space	90°	8' with 5' aisle	18'	24'
Handicapped Van Space	90°	8' with 8' aisle	18'	24'

(b) Parking Area Layout

1. Surface: All parking, driveway areas, and primary access to parking facilities shall be surfaced with asphalt, concrete or other similar hard surfaced materials, unless otherwise approved by the Director of Public Works. Accent paving is required to indicate pedestrian linkages. All vehicles shall park on a hard surfaced area unless otherwise approved by the Zoning Administrator.
2. Integrate Parking Lots with Surroundings: Parking lots shall not dominate the frontage of pedestrian-orientated streets, or interfere with designated pedestrian routes. The pedestrian character of streets and buildings shall be maximized through continuity of building and landscape frontage. Large, unrelieved expanses of parking shall be avoided.
3. All parking stalls shall be painted, striped, or marked to identify the location and width of the parking stalls.

(c) Shared Access: Wherever feasible, parking lots shall share access lanes.

(d) Circulation Area Design: Circulation for parking areas intended to accommodate twenty (20) vehicles or more shall be designed to facilitate the safe movement of vehicles without posing a danger to pedestrians or impeding the function of the parking area. Parking lots that accommodate twenty or more vehicles must maintain continuous circulation patterns, with no dead-ends, and safe access to public streets.

(e) Lighting and Maintenance: All parking area lighting shall comply with the City's lighting requirements and provide adequate lighting for safety if night use is

intended. Parking lots should provide adequate security and should limit visual clutter, parking lot signs, and equipment.

- (f) **Loading Areas:** The City requires all new and substantially remodeled commercial and industrial developments to provide adequate loading zones. The loading zones must be illustrated on the site plan submitted for approval. Loading areas shall not impede major roads, highways, intersections, or other paths of travel. These zones must be located away from areas where there is heavy pedestrian travel unless such areas cannot be avoided.
 - (g) **Paved Surface Setback:** On a case-by-case basis, the Zoning Administrator may waive the minimum paved surface setback.
- (7) **Parking Alternatives:** The Zoning Administrator may approve alternatives to providing the number off-street parking spaces in accordance with the following standards:
- (a) **Shared Parking:** The Zoning Administrator may approve shared parking facilities for developments or uses with different operating hours or different peak business periods if the shared parking complies with all of the following standards:
 1. **Location:** Every shared parking space shall be located no farther than an appropriate distance as determined by the Zoning Administrator from the entrance to each building for which the shared parking is provided.
 2. **Zoning Classification:** Shared parking areas shall be located on a site with the same or a more intensive zoning classification than required for the primary uses served.
 3. **Shared Parking Study:** Those proposing to use shared parking as a means of satisfying off-street parking requirements shall submit a shared parking analysis to the City that clearly demonstrates the feasibility of shared parking. The study shall address, at a minimum, the size and type of the proposed development, location of required parking, the composition of tenants, the anticipated rate of parking turnover, and the anticipated peak parking and traffic loads for all uses that will be sharing off-street parking spaces. The application shall also demonstrate that any parking reduction requested as part of the shared parking study will not result in the spillover of parking onto other properties.
 4. **Agreement for Shared Parking:** The parties involved in the joint use of off-street parking facilities shall submit a written agreement in a form to be recorded for such joint use, approved by the City Attorney. The agreement shall provide for the maintenance of jointly used facilities. The Zoning Administrator may impose such conditions of approval as may be necessary to ensure the adequacy of parking in areas affected by such an agreement. Recordation of the agreement shall take place before issuance of a building permit for any use to be served by the shared parking area. A shared parking agreement may be revoked only if all required off-street parking spaces will be provided in accordance with the requirements of this Zoning Ordinance.

- (b) Off-Site Parking: The Zoning Administrator may approve the location of required off-street parking spaces on a separate lot from the lot on which the principal use is located if the off-site parking complies with all of the following standards:
1. Location: No off-site parking space may be located more than an appropriate distance as determined by the Zoning Administrator from an entrance to the use being served. Off-site parking spaces shall be connected to the use by acceptable pedestrian facilities. Off-site parking spaces may not be separated from the use served by a street right-of-way with a width of more than 80 feet, unless a pedestrian walkway, a traffic signal, a shuttle bus, other traffic control device or remote parking shuttle bus service is provided.
 2. Control of Site: Required parking spaces for residential uses must be located on the site of the use or within a tract owned in common by all the owners of the properties that will use the tract.
 3. Ineligible Activities: Required parking spaces for persons with disabilities may not be located off-site.
 4. Agreement for Off-Site Parking: In the event that an off-site parking area is not under the same ownership as the principal land use served, a written agreement between the recorded owners shall be required, approved by the City Attorney. The agreement shall guarantee the use of the off-site parking area for a minimum period as determined by the City. The Zoning Administrator may impose such conditions of approval as may be necessary to ensure the adequacy of parking in areas affected by such an agreement. A copy of the agreement between the owners of record shall be submitted to the County for recordation in a form acceptable by the City Attorney. Recordation of the agreement shall take place before issuance of a building permit for any use to be served by the off-site parking area. An off-site parking agreement may be revoked only if all required off-street parking spaces will be provided in accordance with the requirements of this Zoning Ordinance.
- (c) District Parking: Minimum required off-street parking spaces may be waived by the Zoning Administrator or reduced for properties within the boundaries of a public parking area that provides district-wide parking facilities, based on the projected parking demand to be addressed by the district-wide facility.
- (d) Stacked, Tandem, and Valet Parking: Stacked, tandem, or valet parking for nonresidential uses is allowed if an attendant is present to move vehicles. In addition, a guarantee acceptable to the City shall be filed with the City ensuring that a valet parking attendant shall always be on duty when the parking lot is in operation. For residential uses, tandem or stacked vehicle parking may be allowed.
- (e) Structured Parking:

1. **Maximum Parking Waiver:** Where 50 percent or more of the parking accessory to a use is in structured parking, there shall be no maximum cap on the number of parking spaces.
 2. **Density Bonus for Structured Parking in the Mixed-Use District:** A density bonus shall be granted for underground parking structures in the mixed-use district. The bonus shall be granted at a ratio of 0.1 du/gross acre of additional bonus density for each structured parking space.
- (8) **Adjustments to Required Parking:** The purpose of this section is to allow adjustments to the minimum number of parking spaces required to avoid constructing unneeded and excessive off-street parking facilities. Reducing the amount of excess off-street parking facilities is intended to provide for more cost efficient site development, to eliminate constructing more impervious surface than necessary, to minimize stormwater runoff, to avoid construction of unnecessarily large stormwater management facilities, and to provide more landscape areas and open space on sites. The total requirement for off-street parking may be reduced as part of the development approval by the Plan Commission as outlined below:
- (a) All uses are eligible for a 20 percent parking reduction if the applicant can prove the reduced parking will not negatively impact the health, safety and welfare of persons utilizing the development and the surrounding neighborhood.
 - (b) The applicant shall submit a study providing an accurate reflection of parking demand for the development. Included in this study shall be alternatives including shared parking, bicycle parking, and pedestrian connections to the development.
- (9) **Interior Parking Lot Landscaping Requirements:** The purpose of interior parking lot landscaping is to improve the appearance of parking lots, provide shade, and improve stormwater infiltration. All parking lots with twenty (20) or more parking spaces shall be landscaped in accordance with the following interior parking lot standards:
- (a) A minimum of five percent (5%) of the asphalt or concrete area of the parking lot shall be devoted to interior planting islands or peninsulas. The planting islands shall contain a minimum of one hundred sixty (160) square feet and be a minimum of nine (9) feet in width.
 - (b) Islands may be curbed or may be designed as uncurbed bio-retention areas as part of an approved Stormwater Plan approved by the City Engineer.

Section 17.304 Off-Street Loading Standards

Any use which has a gross floor area of ten thousand (10,000) square feet or more, and which requires deliveries or makes shipments, shall provide off-street loading facilities in accordance with this Section.

- (1) **Location:** All loading berths shall be located twenty-five (25) feet or more from the intersection of two street right-of-way lines. Loading berths shall not be located within any required front yard or side yard setback area. All loading areas shall be located on private property and shall not be located within, or interfere with, any public right-of-way.

- (2) Size of Spaces: A required off-street loading space shall be at least ten (10) feet wide at least thirty-five (35) feet in length for structures less than twenty thousand (20,000) square feet in gross floor area, and at least ten (10) feet wide by fifty (50) feet in length for larger structures. The above areas shall be exclusive of aisle and maneuvering space, and shall have a vertical clearance of at least fourteen (14) feet.
- (3) Shared Loading: Two or more uses on adjacent lots may share a loading area.
- (4) Surfacing: All open off-street loading areas shall be paved.

Section 17.305 Access Standards (Driveways)

The purpose of this Section is to alleviate or prevent congestion of public rights-of-way so as to promote the safety and general welfare of the public.

- (1) Number of Access Points:
 - (a) Each nonresidential lot shall have not more than two (2) access points on any street frontage adjacent to any lot. Said access shall require approval by the Zoning Administrator and Director of Public Works.
 - (b) For residential uses, two (2) access points serving the same street frontage may be approved by the Plan Commission.
 - (c) In no instance shall any residential lot be permitted to have more than one (1) access point on any one (1) street if its frontage on said street is less than 100 linear feet (as measured along the right-of-way line).
- (2) Access Near Street Intersections: At its intersection with the street right-of-way line on an arterial or nonresidential collector street, no access point shall be located closer than 100 feet from the intersection of any two street right-of-ways unless such street is the only available frontage on the subject property. In all cases, access points shall be located as far from an intersection as the lot size permits.
- (3) Distance Between Access Drives: The minimum distance between access drives serving the same property shall be 25 feet (edge to edge).
- (4) Angle of Intersection with Public Right-of-Way: All access drives shall intersect with any public right-of-way at an angle of not less than 75 degrees, and shall intersect at an angle of 90 degrees where possible.
- (5) Driveways: All driveways installed, altered, changed, replaced, or extended after the effective date of this Ordinance shall meet the following requirements:
 - (a) Urban Reserve or Residential districts: The maximum width of a driveway shall be 35 feet at the curb line or edge of pavement and 20 feet at the right-of-way line. The minimum width of a driveway at the property line shall be ten (10) feet. Widening of a driveway on the yard side of the right-of-way line is permitted and shall, at a minimum, provide for yard area at a 45 degree angle from the property line to the yard side of the driveway. Maximum driveway width is the width of the garage entrance or parking area, up to a maximum of thirty-five (35) feet. The minimum paved surface setback is waived in the case of joint driveways approved by the Zoning Administrator.

- (b) Commercial, Office, or Institutional District: The maximum driveway width shall be 40 feet beginning at the right-of-way line. Access drives may be flared between the right-of-way line and the roadway up to a maximum of three (3) additional feet per side. The minimum paved surface setback is waived in the case of joint driveways approved by the Zoning Administrator. The minimum driveway width in all non-residential districts shall be 20 feet and shall have a minimum clearance height of 13 feet.

Maximum Driveway Width		
Zoning District	Maximum Driveway Width at Street Right-of-Way	Maximum Driveway Width at Curblin/Pavement Edge
Urban Reserve or Residential	20 feet	30 feet
Commercial, Office, or Institutional	40 feet	45 feet
Industrial	40 feet	45 feet

- (6) Traffic Control: The traffic generated by any use shall be channelized and controlled in a manner which avoids congestion on public streets and other safety hazards. Traffic into and out of all off-street parking, loading and traffic circulation areas serving six (6) or more parking spaces shall be forward moving, with no backing into streets or pedestrian ways. Traffic control devices shall be required as determined by the Director of Public Works. A traffic study is required for all buildings containing more than 40,000 square feet.
- (7) Depiction on Site Plan: Any and all proposed access drives on the property being developed or redeveloped shall be depicted as to their location and configuration on the site plan required for the development of the property.
- (8) Paving of Access: All access approach areas located within a street right-of-way shall be paved to the satisfaction of the Director of Public Works with a hard, all-weather surface, and shall be maintained so as to prevent the transport of gravel, dirt, or other eroded material from the subject property into the right-of-way. Paving of new driveway accesses shall be completed within one (1) year following occupancy of a new structure.

SUBCHAPTER 17-4: NONCONFORMING USES, STRUCTURES AND LOTS

Section 17.401 Purpose

Within the Zoning Districts established by this Ordinance, there may exist uses, buildings, structures, and lots that do not conform to the provisions of this Ordinance. The purpose of this Subchapter is to specify those circumstances and conditions under which these nonconforming uses, buildings, structures, and lots shall be permitted to continue.

Section 17.402 Nonconforming Buildings or Structures

A lawful nonconforming building or structure existing on the effective date of this Ordinance may be continued although it does not conform to the provisions of this Ordinance with respect to bulk characteristics including, but not limited to, setback, open space, floor area ratio, height, density, parking facilities, amount of parking, and style, provided that any additions or enlargements shall conform to the provisions of this Ordinance.

Section 17.403 Nonconforming Uses

Per State Statute 62.23(7)(h), the lawful nonconforming use of a building, structure, or land existing on the effective date of this Ordinance may be continued although it does not conform to the provisions of this Ordinance, provided that:

- (1) Structural repairs and/or structural alterations to the building or structure shall not exceed fifty percent (50%) of the total assessed value of the building, premises, structure, or fixture unless permanently changed to a conforming use. A cumulative total of all structural costs shall be maintained by the City.
- (2) The nonconforming use shall not be extended;
- (3) If the nonconforming use is discontinued for a period of twelve (12) months, any future use of the building, premises, structure, or fixture shall conform to the Ordinance.

Section 17.404 Nonconforming Cultivation Uses

Cultivation uses in any district whether it is neither a permitted nor conditional use on the effective date of this ordinance is permitted to continue as a nonconforming use, subject to all Statutory and Ordinance regulations relating to nonconforming uses. If a property owner has a nonconforming cultivation use that has been discontinued at the time of adoption of this Ordinance due to the construction of public facilities on the property, the property owner shall be permitted to continue the nonconforming cultivation use once construction of the public facilities is determined completed by the City Planner.

Section 17.405 Additions and Modifications

- (1) No new basements, additional stories, or construction outside of the perimeter of existing nonconforming structures or building shall be permitted unless the proposed construction complies with all applicable provisions of this Ordinance;

- (2) The replacement of an existing nonconforming porch or deck is permitted provided the replacement porch or deck is confined to the existing three dimensional footprint of the existing porch or deck;
- (3) The replacement of an existing roof is permitted provided the replacement roof is confined to the footprint of the existing structure. A flat roof may be replaced with a pitched roof provided the pitched replacement roof does not exceed the height requirements of this Ordinance and provided no additional stories are added to the structure or building.
- (4) Additions and modifications to legal nonconforming structures that comply with the applicable setback and other applicable dimensional requirements of this Ordinance are permitted.

Section 17.406 Nonconforming Lots

A lawful nonconforming lot existing on the effective date of this Ordinance may be continued although it does not conform to the provisions of this Ordinance, provided that the size and shape of the lot shall not be changed in any way to increase the nonconformity.

- (1) Lots of Record: In any district, a building or structure may be established on a lot of record existing on the effective date of this Ordinance, regardless of the size of the lot, provided that all other requirements of this Zoning Ordinance are complied with.

Section 17.407 Restoration of a Nonconforming Building or Structure

A lawful nonconforming building or structure existing on the effective date of this Ordinance that has been damaged or destroyed may be restored to the size, location, and use that it had immediately before the damage or destruction occurred provided that:

- (1) The nonconforming building or structure was damaged or destroyed on or after March 2, 2006;
- (2) The damage or destruction was caused by violent wind, vandalism, fire, flood, ice, snow, mold, or infestation; and
- (3) The size of the restored building or structure may be larger than the size it was immediately before the damage or destruction if necessary for the structure or building to comply with applicable State or Federal requirements.

SUBCHAPTER 17-5: LANDSCAPING AND SCREENING STANDARDS

Section 17.501 Purpose

This Subchapter is intended to ensure that new landscaping and retention of existing vegetation is an integral part of all development and that it contributes to development, retains and increases property values, conserves water, and improves the environmental and aesthetic character of the community. It is also the intent of this Subsection to provide flexible requirements that encourage and allow for creativity in landscape design.

Section 17.502 Applicability

The following standards apply to all exterior construction and development activity which adds impervious surface, including the expansion of existing buildings, structures, and parking lots, except the construction of detached single-family and duplex dwellings and their accessory structures.

Section 17.503 Landscape Plan and Design Standards

Landscape plans shall be submitted as a component of a site plan, where required, or as a component of applications for other actions, where applicable. Landscape plans for site plans resulting in the installation of impervious surface exceeding ten thousand (10,000) square feet must be prepared by a registered landscape architect. Overall composition and location of landscaped areas shall complement the scale of the development and its surrounding. In general, larger, well-placed contiguous planting areas shall be preferred to smaller, disconnected areas.

- (1) Elements of the landscape plan shall include the following:
 - (a) Plant list including common and Latin names;
 - (b) Site amenities, including bike racks, benches, trash receptacles, etc.;
 - (c) Storage areas
 - (d) Irrigation;
 - (e) Hardscaping;
 - (f) Labeling of mulching, edging and curbing;
 - (g) Areas of seeding or sodding; and
 - (h) Areas to remain undisturbed and limits of land disturbance.
- (2) Plant Selection: Plant materials provided in conformance of the provisions of this Section shall be of nursery quality and tolerant of individual site microclimates. Preferred and prohibited plant materials are listed in Appendix "A".
- (3) Mulch is encouraged to consist of shredded bark or chipped wood or other organic material. Landscape stone mulch is discouraged.

Section 17.504 Landscape Calculations and Distributions

Required landscaped areas shall be calculated based upon the total developed area of the property. Developed area, for the purpose of this requirement, is defined as all parts of the site that are considered impervious surface and are not left in a natural state within a single contiguous boundary, including building footprints, parking and load

areas, driveways, internal sidewalks, patios, and outdoor activity areas. Developed area does not include other land within required setbacks and natural areas on the same property that are left undisturbed.

DEVELOPED AREA LANDSCAPING REQUIREMENTS	
Minimum Required Landscaping Points per 1,000 Square Feet of Impervious Surface	
Zoning District	Landscaping Points
Multi-Unit (Low) Residential	45
Multi-Unit (High) Residential	50
Isthmus Residential Multi	75
General Commercial	40
Mixed-Used Commercial	0
Business Park	30
Industrial	20
Urban Reserve	20
Institutional/Public	45

LANDSCAPING POINTS AND CREDITS			
Plant Category	Landscaping Points Per Plant	Minimum Required Installation Size	Incremental Increase for Larger Plants
Climax Trees	75	2" Caliper	25 pts / 0.5" Caliper
Tall Deciduous Trees	30	1.5" Caliper	25 pts / 0.5" Caliper
Medium Deciduous Trees	15	6' Tall, 1.5" Caliper	10 pts / 1' in height or 0.5" Caliper
Low Deciduous Trees	10	4' Tall, 1.5" Caliper	5 pts / 1' in height or 0.5" Caliper
Tall Evergreen Tree	40	5' Tall	25 pts / 1' in height
Medium Evergreen Tree	20	4' Tall	10 pts / 1' in height
Low Evergreen Tree	10	3' Tall	5 pts / 1' in height
Tall Deciduous Shrub	5	36" Tall	3 pts / 6" in height
Medium Deciduous Shrub	3	24" Tall	2 pts / 6" in height
Low Deciduous Shrub	1	18" Tall	n/a
Medium Evergreen Shrub	5	18" Tall/Wide	3 pts / 6" in height
Low Evergreen Shrub	3	12" Tall/Wide	2 pts / 6" in height

Specific plants permitted in each plant category are contained in Appendix “A”.

- (1) Calculations yielding a fraction up to one-half (1/2 or 0.5) shall be rounded down to the nearest whole number; fractions of more than one-half (1/2) shall be rounded up.
- (2) Landscaping shall be distributed throughout the property along street frontages, within parking lot interiors, and as foundation plantings as specified in this Subchapter.
- (3) Planting beds or planted areas must have at least seventy-five percent (75%) vegetative cover. Non-planted areas shall not be paved, but shall be covered with a weed barrier and mulched.
- (4) Additional landscaping requirements may be specified by the City Planner or Plan Commission.
- (5) On unique sites or sites with unique design opportunities, hardscape features (such as sculptures or statues, walls, fountains, benches, and walkways) may be incorporated into a landscape in lieu of plantings, subject to approval by the Zoning Administrator. Landscaping points assigned to hardscaping features shall not preclude the need to provide the required plantings in other areas of the development.
- (6) Utility and Pedestrian Easements: Landscaping materials, fences and berms which are located within a duly recorded utility easement and/or a pedestrian easement shall not count toward meeting a landscaping requirement. Oconomowoc Utilities will not be liable for damages caused to landscaping in utility easements.

Section 17.505 Frontage Landscaping Requirements

Landscaping and/or ornamental fencing shall be provided between buildings or parking areas and the adjacent street(s), except where buildings are placed at the sidewalk. Landscape material shall include a mix of trees, shrubs and groundcover. In cases where development frontage landscaping cannot be provided due to site constraints, the Zoning Administrator may waive the requirements or substitute alternative screening methods for the required landscaping.

Section 17.506 Foundation Plantings Requirements

Foundation plantings consist primarily of shrubs and native grasses, and shall be installed along building façades, except where building façades directly abut the sidewalk (a zero setback).

Section 17.507 Screening Along District Boundaries

Screening shall be provided along side and rear property boundaries for each lot between non-residential zoning districts and residential zoning districts. Screening shall consist of a solid wall, solid fence, or hedge with year-round foliage, between six (6) and eight (8) feet in height. Height of screening shall be measured from natural or approved grade. Berms and retaining walls shall not be used to increase grade relative to screening height. Under no circumstances shall a fence be the only screening material used as a buffer between land uses.

Section 17.508 Maintenance

The owner of the premises is responsible for the watering, maintenance, repair and replacement of all landscaping, fences, hardscape, and other landscape architectural features on the site. All planting beds shall be kept weed free. Plant material that has died shall be replaced within twelve (12) months.

Section 17.509 Protection of Existing Vegetation

The appeal and character of the site shall be preserved and enhanced by retaining and protecting existing vegetation and trees whenever possible.

- (1) Designation, Protection, and Replacement: The site plan must indicate trees intended to be preserved with a special symbol and the preserved trees must be protected during construction through the use of a fence around the drip line. If any preserved trees are lost to damage or disease within three (3) years after plan approval, the owner must replace said trees with the number of trees that would otherwise have been required.
- (2) Preservation of Existing Vegetation: Every attempt shall be made by the developer/applicant to preserve existing significant trees. When it is necessary to remove significant trees, the developer shall replace 12" caliper or larger deciduous trees with four (4) 3" caliper deciduous trees. Conifers 10' or taller shall be replaced with three (3) 6'-8' coniferous trees.

SUBCHAPTER 17-6: SIGNAGE REGULATIONS

Section 17.601 Purpose, Objectives and Jurisdiction.

- (1) **Purpose and Objectives:** The purpose of this ordinance is to regulate noncommercial, commercial and event signage with a comprehensive system of reasonable, effective, consistent and nondiscriminatory sign standards and requirements. The Common Council, by enacting this ordinance, recognizes the City has a significant and substantial governmental interest in promoting public safety and aesthetic values through the regulation of signs displayed within the City of Oconomowoc. Sign regulations, including but not limited to those which control the type, design, size, location and safe construction, are hereby established to further the goals of safety and aesthetics and achieve more specifically, the following objectives:
- (a) To enable the public to locate goods, services and facilities without difficulty or confusion;
 - (b) To protect property values, public investment and overall neighborhood character by promoting an attractive, harmonious and aesthetically-pleasing environment and preventing conditions which have undesirable impacts on surrounding properties;
 - (c) To promote the development of attractive and harmonious residential districts, viable commercial districts and to identify industrial and other uses;
 - (d) To protect the public and promote safety, including but not limited to traffic and pedestrian safety; and to minimize effects of signs which may distract or obstruct visibility of official traffic signals and other safety or informational devices; and
 - (e) To protect scenic views and the visual environment along all city streets, highways and rights-of-way and to promote overall aesthetics, avoid clutter and avoid inappropriate scale.
 - (f) To preserve the historically and architecturally unique character of the City.

Furthermore, the City of Oconomowoc advocates that this regulation leaves ample and adequate alternative channels of commercial speech communication for the messages portrayed on such advertising signage, namely, print media, broadcast media, and point-of-purchase display, and is narrowly defined so as to limit any prohibitions on commercial speech on exterior signage.

- (2) **Jurisdiction:** This ordinance shall apply to all signs in the City of Oconomowoc. However, this ordinance shall not be construed to amend or conflict with any other ordinances or applicable law governing official traffic signs or signals.

Section 17.602 Sign Application Review and Permitting.

- (1) **Approval Required:** No sign shall hereafter be located, erected, moved, reconstructed, extended, enlarged, converted or structurally altered, nor shall the face of a sign or color be changed without a sign permit and conforming with the

provisions of this chapter, unless said sign is exempt from the sign ordinance requirements per Section 17.603.

- (2) **Approval Process:** Sign applications shall be filed with the City of Oconomowoc Planning Department, which shall review the application for its completeness, accuracy, design integrity, and material for construction. If the sign is approved, the Planning Department shall inform the Building Inspection Department within five business days. If the application is incomplete or the sign does not meet the requirements of this Subchapter 17-6, it may be appealed to the Architectural Commission who shall approve or deny the application within 45 business days of receipt from the applicant. In considering a sign permit, the Planning Department shall consider the following:
 - (a) The appearance, material for construction, location, lighting, height and size of the sign;
 - (b) Safety of operators of vehicles upon the adjoining streets and highways;
 - (c) The effect of the sign on property values within the immediate area; and
 - (d) The effect of such sign with respect to the scenic beauty of the vicinity in which the sign is proposed to be located.
- (3) **Application:** Application for a sign shall be made on forms provided by the Planning Department and must contain the following information:
 - (a) Name and contact information of the applicant and the property owner of the location of building, structure, or lot upon which the sign is to be attached or erected.
 - (b) Name of person, firm, corporation, or association erecting the sign.
 - (c) Written consent of the owner or lessee of the building, structure, or land to which or upon which the sign is to be affixed. If the property owner is the applicant, no written consent is required.
 - (d) A scaled drawing of such sign indicating the dimensions, the materials to be used, the type of illumination, if any, and the method of construction and attachment.
 - (e) A scaled colored copy of the proposed sign showing the exact color scheme is required. The City may accept a superimposed rendering of the site with the proposed sign(s).
 - (f) A scaled site plan indicating the location and position of such sign in relation to nearby buildings, landscaping, structures, public streets and rights-of-way.
 - (g) The applicant shall pay the applicable fee. The fee schedule is on file with the Planning Department. The fee shall be as from time to time determined by the Common Council.
 - (h) Additional information as required by the Planning Department or the City Plan Commission.
- (4) **Architectural Commission Approval:** At the discretion of the Zoning Administrator or upon request of the applicant, the Planning Department may forward sign permit applications to the Architectural Commission to approve the size, height, location,

lighting, materials for construction, and design integrity of selected proposed signage.

- (5) Special Exception: Proposed new signs or modifications to existing signs not in conformance with this Chapter shall require a special exception granted by the Architectural Commission. The sign application shall be forwarded to the Architectural Commission for special consideration and approval without a public hearing.
- (6) Appeals: An applicant may appeal a decision made by the Planning Department to the Architectural Commission. Appeals from the Architectural Commission shall be made to the Plan Commission.
- (7) Sign Permit Required: All approved sign applications shall apply for and receive a sign permit from the City Building Inspection Department prior to installation. Electrical permits shall be required for hardwired illuminated signs.

Section 17.603 Signs Allowed without City Review or Permit

- (1) No Permit Required: The following signs are permitted in all zoning districts without City review or permit, subject to the following and any other applicable regulations:
 - (a) Real estate signs: One real estate sign not exceeding twelve (12) square feet in area in all residential districts or 32 square feet in all other districts which acknowledges the sale or rental of the premises upon which the sign is temporarily located. In residential zoning districts, the property owner shall be allowed to place one sign on the property for sale. One additional off-premise open house sign may be located on property adjacent to the intersection of the street where the sale is to be held and the nearest arterial street on the day of the open house. Signs must be removed on the same day. Other than open house signs, no real estate sign shall be located in a street right-of-way. Signs that become a nuisance or create a vision problem will be removed by the City immediately. The property owner or real estate company shall be responsible for removing all signs no later than five days after the sale of the home or rental of the premises.
 - (b) Rummage sale and garage sale signs: One temporary rummage sale or garage sale sign not exceeding twelve square feet in area may be erected on the property having the sale. One additional off-premises garage sale sign may be located on property adjacent to the intersection of the street where the sale is to be held and the nearest arterial street on the day of the sale. Signs must be removed on the same day. Signs that become a nuisance or create a vision problem will be removed by the City immediately. Rummage sale and garage sale signs shall not be erected or placed within a public right-of-way.
 - (c) Portable/temporary signs: Portable / temporary signs such as banners, pennants, and/or for display purposes in any district, provided that no more than one temporary sign is allowed per property or per business on multi-tenant commercial sites; a portable sign shall not be located in any public right-of-way; shall not be internally illuminated, shall not be located closer than 10 feet to an adjacent property; shall not be over 24 square feet in area; will not extend over

or onto any street, alley, sidewalk, or other public thoroughfare. Individual signs shall be displayed for a maximum of 30 days and reflect a professional appearance. Trailers with changeable copy lettering shall be prohibited.

- (d) **Flags:** Flagpoles may display business name/logos in non residential zoned districts. Flagpoles displaying business logos may be permitted as long as other flags are flying in conjunction with it. One logo flag of a company or business shall be allowed, provided that it is flown along with the American flag and shall not be larger than that flag and no larger than 32 square feet in size.
- (e) **Holiday decorations:** Holiday decorations may not contain a commercial message, shall not encroach upon the street right-of-way and decorations shall not cause a hazard to traffic or adjoining property.
- (f) **Official signs:** Official signs, such as traffic control, parking restrictions, and public building directional signs, may be erected and may encroach upon the street right-of-way, provided that such signs will not cause a hazard to traffic or adjoining property.
- (g) **Election campaign signs:** Election campaign signs may be erected, provided that permission is obtained from the property owner, renter or lessee prior to their placement and provided that such sign shall not be erected more than 60 days before and 10 days after an election. The total of all political signs on a lot shall not exceed 32 square feet. No election campaign sign shall be located in a street right-of-way or on public property.
- (h) **Window/Door signs:** Window or Door signs may be placed on the inside of buildings and shall not be flashing. Signs displayed inside buildings and inside of the glass shall not be subject to the limitations on the number of signs or count towards the business's maximum sign area. Window signs shall not exceed twenty-five (25) percent coverage of the total window area.
- (i) **Memorial signs:** Memorial signs, tablets, names of buildings, and date of erection when cut into any masonry surface or when constructed of metal and affixed flat against a structure, including signs marking sites or buildings of historical significance.
- (j) **Light Pole Mounted Banners:** Light pole mounted banners shall comply with the following: one banner per light pole not to exceed 12 square feet in area; minimum ground clearance height of 6' as measured from adjacent grade to the bottom of the banner. Banners shall be maintained in good repair.
- (k) Temporary contracting business signs (painting, paving, landscaping, etc.) shall not exceed six square feet and shall be removed no later than five days following the completion of a project. No more than one sign may be placed on the property.
- (l) **Construction zones:** The temporary placement of directional signs within the public right-of-way by commercial establishments in construction zones for the purpose of identifying or showing the alternative access location of businesses affected by the construction. Placement of signs shall be at a point of barricade



or detour. Signage shall not be placed in the travel portion of the road, block vision, or operation of construction vehicles. The business shall coordinate with the Planning Department and Police Department for specific placement of the signage. The temporary signage shall be removed following completion of the construction project. This type of signage is subject to the following regulations:

1. Single businesses affected by the construction are permitted to have one temporary sign at the point of barricade or detour. The signage is not to exceed six square feet in area.
 2. A building that contains four or more businesses is permitted to place one temporary sign at the point of barricade or detour for all businesses within the development affected by the construction. Signage for four or more businesses is not to exceed 32 square feet.
 3. The City may remove signs that present a safety hazard or are located within the right-of-way.
 4. The Planning Department may order sign removal if the sign is considered a safety hazard or impedes the progress of a construction project.
 5. Signage may be removed at the discretion of the construction manager during individual phases of the construction project.
 6. Portable trailer signs are prohibited.
- (m) **Temporary construction/development signs:** Temporary signs are permitted for projects with valid City approvals within the City of Oconomowoc. This type of signage is subject to the following regulations:
1. Number of signs: Up to two signs will be permitted per frontage on any parcel.
 2. Size: Temporary construction/development signs shall not exceed 32 square feet in area and shall not exceed eight feet in height.
 3. Duration: Temporary signs shall be removed following completion of construction project or upon the installation of a permanent sign for the development. For residential projects these signs shall be permitted to remain on the subject property until a time at which building permits have been issued for 80 percent or more of the lots or 80 percent of the units sold in the development.
- (n) Home occupation and professional home office signs: One sign or nameplate to identify the approved business conducted on the property. Said sign shall not exceed two square feet in area and shall be mounted flush against the dwelling. The sign shall not be illuminated.
- (o) Farm or rural estate sign: One sign identifying the farm or estate property on parcels not less than five acres in area may be permitted. The sign shall not exceed 20 square feet in area.
- (p) Directional signs: Six square feet in area or less with a maximum height of four feet are allowed. Directional signs include, but are not limited to,



those that read "enter," "exit," "shipping," and "receiving." Company logos may be on directional signs, not to exceed one square foot per sign. There shall be a minimum setback of 3' from any property line.

- (q) Community Information signs: A sign which displays information of interest to the general community regarding scheduled public events and public activities. Signs shall be erected not more than 30 days prior to event and removed within 2 days following said event. Each property is allowed no more than one Community Information sign at one time. Signs shall not exceed 24 SF, nor have a maximum height exceeding 8 feet.
- (r) Sandwich Board / A-Frame signs: Sandwich Board / A-Frame signs shall not exceed three and one half feet (42 inches) in height and two and one half feet (30 inches) in width; shall not block the sidewalk. In the Downtown District area the sign shall be located on the brick paver area. Each business is allowed no more than one sandwich board sign advertising the business. Multi-tenant buildings are allowed one sign per 20 linear feet of building width, with a minimum separation of 10'. Sandwich board use shall be limited to advertising the on-site business. No off-premise business or event shall be advertised. Signs shall be non-illuminated and removed at the end of the business day.
- (s) Vehicle Signs: Provided they are attached to a vehicle not trailers and incidental to the primary use of the business. Vehicles with advertising shall only be allowed to park on the premise for said business that holds an approved occupancy permit. Vehicles must be "in-use", which is defined as using the vehicle for business use by moving the vehicle off site at least once per business day. Long term storage of vehicles with advertising shall not be allowed.

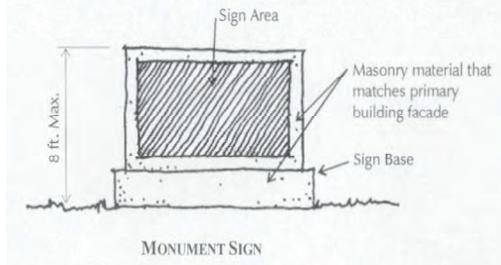


Section 17.604 General Provisions

- (1) Unused / Abandoned Signs:
- (a) All unused signs that are also nonconforming with the provisions of this subchapter shall be removed from the premises upon which it is located within 30 days from the date of notice of violation.
- (b) All unused signs that otherwise conform to the provisions of the sign ordinance and have a valid sign permit may remain on the premise for six (6) months following the conclusion or termination of the reason for the sign. The unused sign shall have the copy, text, icon or any other message delivering features removed within 30 days from the date of notice of violation.
- (2) Measurement of Signs: In calculating the area of a sign to determine whether it meets the requirement of this chapter, the Planning Department shall include the sign copy area, but not the border or frame surrounding that copy. Supporting members of a sign shall be excluded from the area calculation. Area of irregularly

shaped signs or signs containing two or more detached elements shall be determined by the area of the smallest regular polygon that will encompass all elements of the sign.

Measuring of Sign Area



Ground Sign



Wall Signs

(3) Location:

- (a) All signs shall be constructed / erected on the business property.
- (b) No sign shall be located within the vision clearance triangle.
- (c) No sign shall identify or direct attention to a business, activity, or enterprise that is not located on the same premises as the sign. Off-premises signs, except official signs, are prohibited in the City of Oconomowoc.
- (d) When required for safety, curbs, protective bumpers or planters shall be placed below signs to prevent damage from passing motor vehicles or pedestrians.

(4) Maintenance:

- (a) The owner of any sign shall keep it in good maintenance and repair, which includes restoring, repainting to the same color, or replacement of a worn or damaged legally existing sign to its original condition. General maintenance does not require a sign permit. The owner shall also maintain the premises on which the sign is erected in a clean, sanitary, and inoffensive condition, free and clear of all obnoxious substances, rubbish, weeds, and grass. Restoration or painting for the same business which changes the name, size, color, face or location of a sign will not require a new sign permit.
- (b) The owner of any sign shall be required to have all parts and supports of a sign properly painted as directed by the Planning Department unless they are galvanized or otherwise treated to prevent rust and deterioration.
- (c) If the sign ownership should transfer, the new owner shall be responsible for the maintenance of the sign.
- (d) If the name of the business changes, the property owner shall be required to submit a new sign application.

Section 17.605 Non-Conforming Signs

(1) Existing Non-Conforming Signs:

- (a) Signs lawfully existing at the time of the adoption or amendment of this chapter may be continued although the use, size or location does not conform to the provisions of this chapter. However, it shall be deemed a nonconforming sign, and the provisions of this chapter shall apply to specific nonconforming rights.
- (b) Any legal nonconforming sign hereafter relocated, moved, reconstructed, extended, enlarged, changed (not including changing the sign face), altered, or modified by the owner's request shall be made to comply with the provisions of this chapter. Maintenance of non-conforming signs including changing the sign face of existing advertising areas, replacing light bulbs and painting is permitted. Non-conforming signs damaged by storm events or accidental shall be allowed to be reconstructed back to the degree of non-conformity as it was prior to the damaging event.

Section 17.606 Construction Standards

(1) General Standards:

- (a) Signs shall not resemble, imitate, or approximate the shape, size, form, or color of railroad or traffic signs, signals or devices.
- (b) Signs shall not obstruct or interfere with the effectiveness of railroad or traffic signs, signals or devices. Signs shall not be placed so as to obstruct or interfere with traffic visibility.
- (c) No person shall display upon any sign or other sign structure any obscene, indecent, or immoral copy.
- (d) No signs or any part thereof or sign anchors, braces, or guide rods shall be attached, fastened, or anchored to any fire escape, fire ladder, or standpipe, and no such sign or any part of any such sign or any anchor, brace, or guide rod shall be erected, put up, relocated, or maintained so as to hinder or prevent free ingress or egress through any door, doorway, window, or fire escape or so as to hinder or prevent the raising or placing of ladders against such building by the Fire Department of the City, as necessity therefore may require.

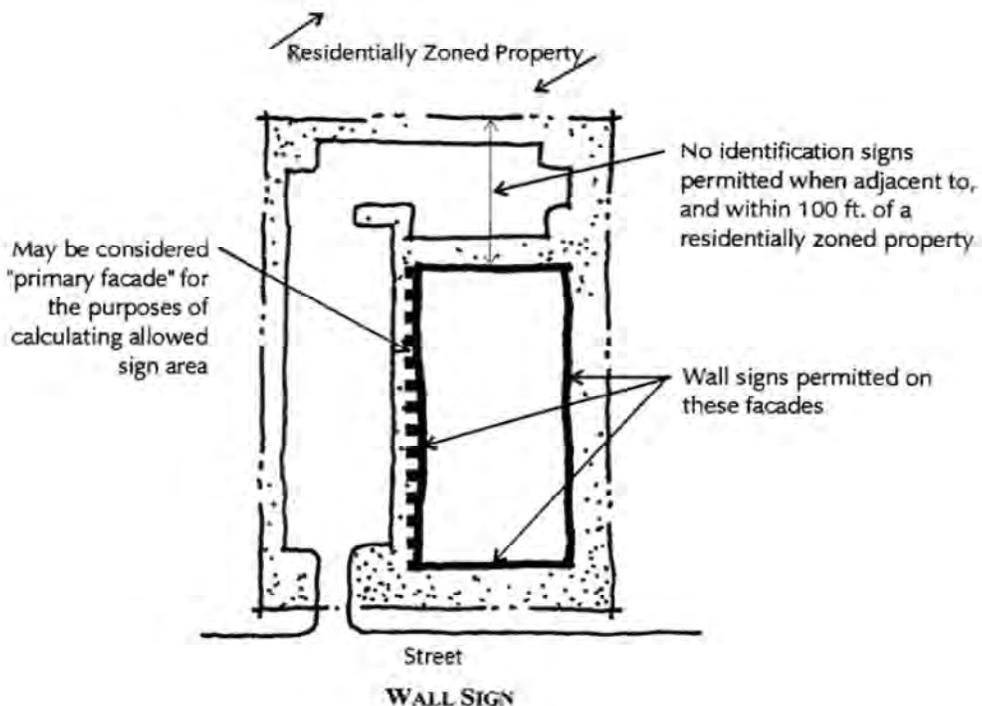
(2) Lighting:

- (a) Illuminated signs, other than digital reader boards displaying time and temperature, shall not be illuminated during non-business hours or beyond 10:00 PM, whichever is later.
- (b) No sign shall be lighted in such a way as to cause glare or impair driver visibility upon public ways or adjacent properties. If external illumination is approved by staff, the fixture shall be mounted on a permanent unmovable base and the neck so as to prevent the fixtures from being tampered with or redirected. The sources of a sign's illumination (bulb or direct lamp image) shall not be visible from any street, sidewalk or adjacent property.
- (c) Externally lit signs shall be lit with fully shielded fixtures.
- (d) Signs shall not flash, animate or blink other than approved LED devices. Sirens, strobe lights and other illuminated devices shall not be used to draw attention to a sign or business.

- (e) Signs located in the Downtown District, shall conform with the sign criteria detailed in Section 17.609(4).
- (3) **Wind Pressure and Dead-Load Requirements:** The applicant and installers shall ensure that all signs and other display structures shall be designed and constructed to withstand a minimum wind load of 80 miles per hour and snow load of not less than 40 pounds per square foot of area and shall be constructed to receive dead loads as required by the Building Inspector pursuant to the City Building Code.
- (4) **Landscaping:** Freestanding signs shall be landscaped at their base. The plantings shall extend a minimum of one (1) foot beyond the edges of the sign. A landscape plan shall be reviewed and approved by the City Planning Department. Landscaping shall consist of shrubs, flowers, small trees or dry landscaping materials including, but not limited to, decorative rock, railroad ties, bark chips, and other decorative materials. The landscaping plan for permanent freestanding signs shall be approved at the time the sign application is approved.

Section 17.607 Sign Standards

- (1) **Wall Signs or Building Signs:** Wall signs or building signs shall be placed against the exterior walls of buildings; the total area of signage shall not exceed one and one half square foot in area for every one linear foot of building face width on which it is mounted; and shall not exceed the height or project beyond the building. There is no limit to the number of wall signs on a building; subject to the total sign area is not to exceed the allowance for said building. Multiple tenant buildings shall have a master sign plan approved identifying maximum areas for each tenant. No wall signs shall be permitted when adjacent to or within 100 feet of a residentially zoned property.



- (2) **Marquee and Canopy Signs:** Marquee and canopy signs affixed flat to the surface of a marquee or canopy are permitted in lieu of a wall sign, provided that the sign does not extend vertically or horizontally beyond the limits of such marquee, awning, or canopy. A marquee or canopy may extend up to 12 feet beyond the building to which it is affixed; however, it shall not extend closer than one foot to the vertical plane formed by the curb line in a shopping center. A name sign not exceeding four square feet in area located immediately in front of the entrance to an establishment may be suspended from a marquee or canopy, provided that the name sign is at least eight feet above the sidewalk. The canopy sign shall be considered one of the two allowable signs. Upon consent of the Director of Public Works, canopies in the Downtown District may extend 4' into the public right-of-way and shall have a minimum clearance of 8' from the pavement grade.
- (3) **Projecting Signs:** Projecting signs are affixed to the building and project out. Projecting signs in the Downtown Area may project no more than 5' into the public right-of-way. The maximum area for projecting signs is 12 SF. The bottom edge of the projecting sign shall be mounted to provide a minimum clearance zone of 8' between the sign and ground elevation.
- (4) **Monument / Ground signs:**
- (a.) All new signs and/or replacement of existing signs located along arterials or major thoroughfares shall be placed on a monument base constructed of the same material and color or shall enhance the exterior architecture of the principal building. Arterials include Wisconsin Avenue, Summit Avenue, STH 67, I-94, Silver Lake Street, Valley Road, and Brown Street. Monument signs are also required within the Oconomowoc industrial parks.
 - (b.) The width of the sign base shall be adjusted to match the width of the sign box/sign panel. The sign base shall be a minimum of 18 inches tall. The monument sign shall not exceed eight feet in overall height above the mean lot grade and shall be entirely outside the sign setback line.
 - (c.) Monument signs shall not exceed 50 square feet in face area per side. The face area includes all surface area of the signage box and sign face but excludes the surface area of the signage base described.
 - (d.) Monument signs may be positioned either parallel or perpendicular to the public right-of-way and shall be set a minimum of 10' from the front lot line and 5' from other lot lines.
 - (e.) Address plaque or numbers shall be required on the monument base or incorporated onto the sign face and shall not be counted towards the overall signage area.

17.608 District Regulations

- (1) **Residential Signs:** Sign Regulations Applicable to the UR, RR, SR, TR, RML, RMH, IRM, and IRS zoning districts.
- (a.) Signs shall comply with all provisions of the Municipal Code, including Sections 17.606 and 17.607 for general signage regulations and definitions.

- (b.) Signs identified in Section 17.603 are allowed in residential districts without a permit, subject to meeting all established regulations. All signs not identified in Section 17.603, but allowed in the zones listed above shall obtain a sign permit prior to installation.
- (c.) Rules for Particular Sign Purpose:
 - 1. Identification Sign for multi-family dwelling, institutional use, or group development is allowed one monument and one wall sign, up to 32 SF each. Subdivisions are allowed one identification sign at each entrance not to exceed 32 SF in area, with a maximum height of 8'. The minimum required setback is 10 feet from front yard lot line and 5 feet from side yard lot line.
- (2) Non-Residential Signs: Sign Regulations Applicable to the GC, MC, BP, I, and IP zoning districts.
 - (a.) Signs shall comply with all provisions of the Municipal Code, including Sections 17.606 and 17.607 for general signage regulations and definitions.
 - (b.) Signs identified in Section 17.603 are allowed in business, industrial and institutional districts without a permit, subject to meeting all established regulations. All signs not identified in Section 17.603 but allowed in the zones listed above shall obtain a sign permit prior to installation.
 - (c.) Rules for Particular Sign Purpose:
 - 1. Multi-tenant building signs are referred to in Section 17.609(3).
 - 2. Wall Sign – For single tenant buildings, one primary wall sign with a maximum area of one and one half square feet of signage for every linear foot of exterior wall length on the supporting wall, up to 50 square feet. One secondary wall sign up to 50 square feet is allowed on a different wall, subject to the wall containing a secondary entrance or facing a road or parking lot.
 - 3. Monument / Ground Sign – One free-standing monument/ground sign per lot. The maximum area permitted is one-quarter square foot of signage for every foot of public street frontage on the street the sign will be adjacent to, up to a maximum sign area of 50 square feet. The maximum height is eight feet. The minimum required setback is 10 feet from front yard lot line and 5 feet from side yard lot line.
 - 4. Marquee, Canopy or Projecting signs are allowed as detailed in Section 17.607(2) and (c) and may be substituted for the wall sign.

	Zoning Districts UR, RR, SR, TR, RML, RMH, IRM and IRS	Zoning Districts GC, MC, BP, I, and IP
Wall Signs Area	2 SF.	1.5 SF for every linear foot of wall length
Number	1	2 sign maximum
Setbacks	N/A	N/A
Height	N/A	On Building
Ground Signs		
Area	32 SF maximum for developments	50 SF maximum per side
Number	1 per development	1 per lot
Setbacks	10' minimum	10' front yard, 5' side yard
Height	8' maximum	8' maximum
Sandwich Boards	N/A	2.5' x 3.5' max. size

17.609 General Sign Regulations:

- (1) Time-and-Temperature, LED Devices and Changeable Copy Signs:
 - (a.) Shall not exceed 25% of the total sign area and the area devoted to the changeable display shall be counted towards the total sign area.
 - (b.) Shall not change more frequently than once every thirty (30) seconds.
 - (c.) Shall not be displayed during non-business hours, unless the sign is a time and temperature sign.
 - (d.) Shall not exceed more than three (3) lines of text.
 - (e.) Text lines must be at least four (4) inches in height.
 - (f.) Shall consist of letters and numbers only.
 - (g.) Animated, flashing, multi-colored displays or similar types are prohibited.
 - (h.) Time and temperature displays are permitted so long as the display changes no more frequently than once every six (6) seconds.
 - (i.) All electronic LED signs and Changeable Copy Signs shall be approved by the Architectural Commission.
- (2) Number of signs:
 - (a.) Buildings occupied by a single business are allowed wall signage in accordance with Section 17.608. In addition, businesses outside the Downtown area, may erect one ground sign. Businesses with multiple street frontages and buildings exceeding 40,000 square feet may submit an application to the Planning for one additional wall sign. The building must meet both criteria for minimum building size and multiple street frontages.
 - (b.) All multi tenant buildings with four tenants or more may provide a wall sign tenant directory up to 8 square feet that shall not count towards the wall signage.

- (c.) Separate individual channel lettering wall or canopy or fascia signs may be allowed for each tenant in a retail, shopping, industrial or commercial center, subject to the approval of an overall coordinated sign plan by Planning staff for the building. Size of wall signs approved in this manner shall be figured using the width of the bay occupied by each tenant.
 - (d.) Large developments, including single or multiple buildings with a cumulative size of over 40,000 square feet, may have an additional ground or wall sign to identify the development, subject to an application being filed and approved by the Architectural Commission.
 - (e.) Price signs for gasoline or diesel fuel sales as required by law shall not be subject to limitations on numbers of signs; however, such price signs shall not exceed 32 square feet in area.
- (3) Overall Coordinated Sign Plan:
- (a.) Master Sign Plan: All multiple tenant buildings shall be required to submit a coordinated master sign plan to the Architectural Commission for approval. The intent of the master sign plan is to set forth a theme for the placement, lettering style, color, construction, material and related design considerations of signs, while at the same time minimizing sign confusion and clutter. All owners, tenants and subtenants shall comply with the approved Master Sign Plan. The Master Sign Plan may exceed the permitted number and size of signs allowed, per the discretion of the Architectural Commission.
 - (b.) Master identification sign: The overall coordinated sign plan shall permit multiple-tenant buildings with more than four tenants to have one freestanding monument sign identifying the name of the commercial center as a master identification sign. The master identification sign can display up to four tenants, provided that it is a four-tenant-or-less building.
 - (c.) Wall signs: The overall coordinated sign plan shall permit multiple-tenant buildings to have a single wall sign for each approved business located on the building. In addition to the wall sign, the business name may be placed on a single master identification monument sign.
- (4) Downtown Signage Design Criteria: Signs in the Downtown Area as determined by the Planning Department shall be in conformance with the following:
- (a) Downtown signs shall not be internally illuminated.
 - (b) Sign shall not conceal significant architectural features.
 - (c) Sign lighting shall not overpower the façade or streetscape.
 - (d) Flashing signs, external neon and plastic signs shall be prohibited.
 - (e) The sign shall complement the building character.
 - (f) Sign messages shall be unified with coordinated colors and lettering styles.
 - (g) Signs shall be constructed with long-lasting materials, high quality enamel paints and decay-resistant woods.

- (h) Obsolete signs shall be removed in a timely manner. After a business activity concludes, the business owner and / or property owner is responsible for removal of all signs.
 - (i) The scale of signage should be proportional to smaller buildings in the Downtown Area and be consistent with the pedestrian environment.
 - (j) Canopies in the Downtown area shall not be internally illuminated. Canopies with translucent materials shall be prohibited.
- (5) Prohibited Signs: The following signs are prohibited within the City:
- (a) Off-Premise Advertising signs
 - (b) Pole signs
 - (c) Roof signs
 - (d) Billboards
 - (e) Inflatable devices
 - (f) Pennants and streamers
 - (g) Search lights or beacons
 - (h) External neon signs
 - (i) Fluttering signs
 - (j) Trailer mounted signs
- (6) Enforcement: In order to achieve the general purpose and objectives of the Sign Ordinance, it is necessary to remove all signs that are illegal, nonconforming, prohibited and unused. Each such classification of signs involves a varying level of impact upon the general purpose and objectives of the Sign Ordinance.
- (7) Sign Removal: Any sign and its supporting structure determined to be in violation of the Sign Code shall be removed within a time period established by the City Planning Department, unless the City Planning Department determines that such sign qualifies as a nonconforming sign. If such signs are not removed from the premises by the owner, user, or property owner following the time period established by the City Planning Department, such signs shall be subject to removal by the City Planning Department or his/her designee. The existence of any prohibited or illegal sign shall also be considered a violation of the provisions of the sign code and shall be subject to penalties.
- (8) Compliance: A business or property that has legal signage that does not meet the requirements of the Sign Ordinance shall be allowed to keep the legal non-conforming signage. If an applicant or property owner requests new signage (other than sign face replacements), the new signage shall meet all requirements of the sign ordinance.
- (9) Penalty: Any person who violates any provision of this chapter or does not comply with the City approval shall be subject to a penalty as provided in Section 25.04 of the Municipal Code. Each day a violation exists constitutes a separate violation and is punishable as such.

Section 17.610 Definitions

The following definitions shall be used by this Subchapter to assist in the establishment of clear cut signage regulations. In general, Sign Types refers to the style of the sign. Sign Purposes refer to where or how a sign is used. Sign Measurement explains how the dimensions of a sign are determined.

- (1) **Sign:** Any object, device, display, structure, or part thereof, which is used to advertise, identify, display, direct or attract attention to an object, person, institution, organization, business, product, service, event, or location by any means, including words, letters, figures, designs, symbols, fixtures, colors, illumination, or projected images. Signs do not include the flag or emblem of any nation, organization of nations, state, city, religious, fraternal, or civic organization; also merchandise and pictures or models of products or services incorporated in a window display, works of art which in no way identify a product, or scoreboards located on athletic fields. Definitions of particular functional, locational, and structural types of signs are listed in this Section. (Traffic control and other public agency signs located within a right-of-way are not included within this definition and are not regulated by the provisions of this Chapter.)
- (2) **Canopy Sign:** A type of projecting, on-building sign consisting of a fabric or fabric-like sheathing material.
- (3) **Changeable Copy Sign:** A sign that is designed so that characters, letters, or illustrations can be changed or rearranged without altering the face or the surface of the sign. Such signs are also referred to as “electronic message boards” or “time and temperature devises.” A changeable copy sign can be a wall sign, projecting sign or freestanding sign.
- (4) **Community Information Sign:** A sign which may have changeable copy and which is limited to the display of information of interest to the general community regarding scheduled public events and public activities.
- (5) **Directional Off-Premise Sign:** A sign which indicates only the name, direction, and/or distance of a governmental facility. This definition does not pertain to off-premise advertising signs.
- (6) **Directional On-Premise Sign:** A sign which indicates only the name, logo (if under one square foot), and or direction of a pedestrian or traffic facility, or a particular building within a complex of structures, on the property on which said facility or building is located.
- (7) **Freestanding Sign:** A self-supporting sign resting on or supported by means of poles, standards, or any other type of base on the ground. This type of sign includes monument signs and ground signs. The base and support(s) of any and all freestanding signs shall be concealed and shall comply with the State Building Code.
- (8) **Gasoline Pricing Sign:** Wisconsin Statutes require that all sellers and distributors of motor fuel shall post in a conspicuous place and on every pump the net selling price per gallon of such motor fuel. The price display on a motor fuel sign is exempt from the size limitations on a freestanding or wall sign. The exemption shall apply only to fuel prices, and not to brand names and logos, or to special sales of not-fuel

products. The exempt area on any pricing sign shall be limited to no more than 32 square feet.

- (9) **Identification Sign:** A sign indicating the name and/or address of the project, property owner, tenant and/or manager of the property, address, and name and phone number of the property manager.
- (10) **Marquee Sign:** A type of projecting, on-building sign sheltering the entrance and/or entrance approaches of a theater, auditorium, fairground, museum or other use, which advertises present and scheduled events.
- (11) **Monument Sign:** A type of freestanding sign whose bottom edge is located within one foot of a ground-mounted pedestal and whose top edge is located no more than eight feet high.
- (12) **Multiple Tenant Sign:** A building with more than one business that has gained approval from the City.
- (13) **Off-Premise Sign:** A sign which directs attention to a business, commodity, service, or entertainment conducted, sold, or offered elsewhere than upon the premises where the sign is displayed. Advertising signs include billboards. No new off-premise advertising signs shall be permitted within the City.
- (14) **Projecting Sign:** A type of on-building sign, other than a wall sign which is attached to and projects more than one foot, generally perpendicular from a structure or building face.
- (15) **Temporary Sign:** A sign or advertising display (including festoons, pennants, banners, pinwheels and similar devices) intended to be displayed for a certain period of time. Included in the definition of "temporary signs" are retailers' signs temporarily displayed for the purpose of informing the public of a "sale" or special offer.
- (16) **Vision Clearance Triangles:** The area formed by measured along the property line on corner lots for a distance of 15' in each direction along each right-of-way line and connected by a hypotenuse to form a triangle. No signs in excess of 30 inches in height shall be allowed in the vision clearance triangle area.
- (17) **Wall Sign:** A type of on-building sign mounted parallel to a building façade or other vertical building surface.
- (18) **Window Sign:** Any sign placed inside or upon an interior window surface, or painted directly upon a window, and which is usually intended to be seen from the exterior.

SUBCHAPTER 17-7: PLAN COMMISSION, ARCHITECTURAL COMMISSION, ZONING BOARD OF APPEALS, AND ZONING ADMINISTRATOR

Section 17.701 Purpose of Administrative Commissions, Boards and Administrators

The purpose of this Subchapter is to establish the functions of the Plan Commission, Architectural Commission, the Zoning Board of Appeals, and the Zoning Administrator.

Section 17.702 Plan Commission

The Plan Commission, together with its other statutory duties, shall make reports and recommendations relating to the planning and development of the City to the Common Council, other public officials and other interested organizations and citizens. The Commission, its members and employees, in the performance of its functions, may enter upon any land and make examinations and surveys. In general, the Plan Commission shall have such powers as may be necessary to enable it to perform its functions and promote municipal planning. Under this Code, its functions are primarily recommendatory to the Common Council pursuant to guidelines set forth in this Code as to various matters, and, always, being mindful of the intent and purpose of this Code. Recommendations shall be in writing. A recording thereof in the Commission's minutes shall constitute the required written recommendation. The Commission may, in arriving at its recommendation, on occasion and of its own volition, conduct its own public hearing.

Section 17.703 Architectural Commission

The purpose of the Architectural Commission is to promote compatible development, promote stability of property values, to foster the attractiveness and functional utility of the community as a place to live and work, to preserve the character and quality of the built environment by maintaining the integrity of those areas which have a discernible character or are of a special historic significance, to protect certain public investments in the area, and to raise the level of community exceptions for the quality of its environment. To this end, architectural design principles are established in this Code as criteria for the Architectural Commission reviews. The Architectural Commission shall not review single-family and two-family projects, unless located in an isthmus zoning district. In all zoning districts, except the MC, IRM, and IRS Districts, the Architectural Commission shall approve or deny all new buildings or additions greater than 5,000 square feet. In the MC District, the Architectural Commission shall approve or deny all exterior building changes, including but not limited to façade/roof changes, all additions and new construction (no size limitation). In the IRM and IRS Districts, the Architectural Commission shall approve or deny all new construction and major renovations (which in the opinion of the Zoning Administrator are significant).

- (1) **Appeals:** Any person aggrieved by a decision of the Architectural Commission shall have the right to appeal such decision to the Plan Commission provided such appeal is taken within 30-days of the final action of the Architectural Commission.

Section 17.704 Zoning Board of Appeals

The Zoning Board of Appeals shall have the power and duty to review and determine all matters relating to requested variances, appeals, and interpretations of the provisions of this Zoning Ordinance.

- (1) **Establishment and Membership:** A Zoning Board of Appeals is hereby established. The Zoning Board of Appeals shall consist of five (5) members appointed by the Mayor, subject to confirmation by the Common Council, for three (3) years, except that of those first appointed, one shall serve for one year; two for two years. The members shall serve without compensation and shall be removable by the Mayor for cause upon written charges and after public hearing before the Common Council. The Mayor shall designate one of the members chairman. The Mayor shall appoint subject to confirmation of the Board for staggered terms of three (3) years, two alternate members of such board, in addition to the five members above provided for. The Mayor shall designate one of the alternate members as first alternate and the other as second alternate. The first alternate shall act, with full power, only when a member of the board refuses or declines to vote, is disqualified because of interest, or when a member is absent. The second alternate shall so act when the first alternate so refuses or declines to vote, is disqualified because of interest or is absent or when more than one member so refuses or declines, is disqualified, or is absent. Other provisions herein appearing, with regard to removal and filling of vacancies, shall apply to such alternates. Vacancies shall be filled for the unexpired terms of members whose terms become vacant. Appointments shall be made at the organizational meeting the Third Tuesday in April. Terms of office shall commence the first day of May. The City Clerk, or designee, shall serve as Secretary of the Board. The Board of Appeals may employ other employees.
- (2) **Organization:** The Board of Appeals shall adopt rules for its government and procedure. Meetings of the Board of Appeals shall be held at the call of the Chairperson, and at such other times as the Board of Appeals may determine. The Chairperson, or in his/her absence an elected Acting Chairperson, may administer oaths and compel the attendance of witnesses. All meetings shall be open to the public. The Board of Appeals shall keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which shall be immediately filed in the office of the Board of Appeals, which is the City Clerk's office, and shall be a public record.
- (3) **Powers:**
 - (a) The Board of Appeals shall have the following powers:
 1. To hear and decide appeals when it is alleged there is error in any order, requirement, decision or determination made by the Zoning Administrator or Building Inspector.
 2. To hear and act upon applications for variances from the terms provided in this Ordinance.
 3. To hear and act upon all other matters referred to it upon which it is required to act under this Ordinance.

4. To establish time limits for variances to commence and time limits for variances to be completed.
 - (b) In exercising the above listed powers, the Board of Appeals may reverse or affirm wholly or in part or may modify any order, requirement, decision or determination appealed from and shall make such order, requirement, decision, or determination as in its opinion ought to be made in the premises and to that end shall have all the powers of the Zoning Administrator or other administrative officer from whom the appeal is taken. If a quorum is present, the members of the Board of Appeals may reverse any order, requirement, decision, or determination appealed from, or decided in favor of the applicant on any matter on which it is required to pass, by a majority vote of the members present.
 - (c) In addition to the foregoing powers, the Board of Appeals shall have the following specific powers:
 1. The Board of Appeals shall have the power to call on any other City department for assistance in the performance of its duties and it shall be the duty of such other departments to render such assistance as may be reasonably required.
 - (d) Except as specifically provided, no action of the Board of Appeals shall have the effect of permitting in any district uses prohibited in such districts.
- (4) **Appeals:** Appeals to the Board of Appeals may be taken by any person aggrieved or by any officer, department, board or bureau of the City affected by any decision of the administrative officers. Such appeal shall be taken within a time, as provided by the rules of the Board of Appeals, by filing with the officer(s) from whom the appeal is taken and with the Board of Appeals a notice of appeal specifying the grounds thereof, together with payment of a filing fee as may be established by the Common Council. The officer(s) from whom the appeal is taken shall forthwith transmit to the Board of Appeals all papers constituting the record of appeals upon which the action appealed from was taken. The Board of Appeals shall fix a time for the hearing of appeals and give public notice thereof as well as due notice to the parties in interest, and shall decide to same within a reasonable time.
- (5) **Review by Court of Record:** Any persons aggrieved by any decision of the Board of Appeals may present to a court of record a petition, duly verified, setting forth that such decision is illegal and specifying the grounds of the illegality. Such petition shall be presented to the court within 30 days after the filing of the decision of the Board of Appeals.

Section 17.705 Zoning Administrator

- (1) **Designation:** The Zoning Administrator, or such other person as may be designated by the Common Council, is hereby designated as the administrative and enforcement officer for the provisions of this Code and is also herein referred to as the Zoning Administrator. The duty of the Zoning Administrator is to interpret and administer this Zoning Ordinance and to issue all permits required by this Ordinance.

- (2) **Duties:** The provisions of this Chapter shall be administered and enforced by the Zoning Administrator or a designee, who in addition thereto and in furtherance of said authority shall:
- (a) Determine that all Site Analyses, Building Permits, Occupancy permits, Sign Permits, Site Plans, (and their constituent plans) comply with all provisions of this Chapter.
 - (b) Conduct (or request that the Building Inspector or Fire Department conduct) inspections of buildings, structures, waters and land to determine compliance with all provisions of this Chapter.
 - (c) Be permitted access to premises and structures during reasonable hours to make those inspections as deemed necessary by him to ensure compliance with this Chapter. If, however he/she is refused entry after presentations of identification, he/she may procure a special inspection warrant in accordance with Wisconsin Statutes 66.0119. Conduct inspections of buildings, structures, waters and land to determine compliance with all provisions of this Chapter.
 - (d) Provide staff assistance to the Common Council, Plan Commission and Zoning Board of Appeals as may be required.
 - (e) Maintain permanent and current records of this Chapter, including but not limited to all maps, amendments, conditional uses, temporary uses, sign permits, site plans, occupancy permits, variances, appeals, interpretations, and applications therefore.
 - (f) Receive, file and forward all applications for all procedures governed by this Chapter to the designated official bodies.
 - (g) Investigate all complaints made relating to the location of structures and the use of structures, lands, and waters, give notice of all violations of this Code to the owner, resident, agent, or occupant of the premises, and report uncorrected violations to the City Attorney in a manner specified by him/her.
 - (h) Institute, in the name of the City, any appropriate actions or proceedings against a violator of this Chapter, as provided by law.
 - (i) Prohibit the use or erection of any structure, land or water until he/she has inspected and approved such use or erection.
 - (j) Where useful, the Zoning Administrator, or his/her agent, may set marks on bridges or buildings or other markers which show the depth of the regional flood; or may set marks delineating the boundaries of wetlands.
 - (k) Request assistance and cooperation from the Building Inspector, Director of Public Works, City Engineer, City Fire Department, City Police Department and City Attorney as deemed necessary.
 - (l) Make available to the public, to the fullest extent possible, all reports and documents concerning the City's comprehensive plan and ordinances. In addition, information in the form of reports, bulletins, maps, and engineering data shall be readily available and widely distributed. The Common Council may set fees necessary to recover the cost of providing information to the public.
 - (m) Make interpretations regarding the provisions of this Chapter.

- (n) Grant minor variations from the dimensional (setback, height, and area) requirements of this Ordinance; up to a maximum variation of 5% for setbacks and height limitations; and up to a maximum variation of 5% or 1,000 square feet for area requirements (whichever is less); so long as the spirit and intent of the performance standards are preserved.

SUBCHAPTER 17-8: PROCEDURES AND ADMINISTRATION

Section 17.800 Purpose of Procedural Regulations

The purpose of this Subchapter is to establish the procedural requirements for zoning text amendments, zoning map amendments, planned development or other overlay district applications, design review and approval, conditional use review and approval, temporary use review and approval, sign permits, variances, special exceptions, and appeals of the Zoning Administrator.

Section 17.801 Standard Procedural Regulations

The following procedural requirements shall apply to all procedural regulations of this Subchapter, except variances and appeals of the Zoning Administrator Interpretations, unless stated otherwise:

- (1) **Consolidated Applications and Review:** Multiple applications for the same development proposal may be consolidated for submittal and review, depending on the complexity of the proposal, as required by the City.
- (2) **Pre-Application Conference:** All items requiring Plan Commission review and approval require a pre-application conference with City Staff. The purpose of a pre-application conference is to provide an opportunity for an informal evaluation of the applicant's proposal and to familiarize the applicant and City Staff with the applicable provisions of this Zoning Ordinance, the Comprehensive Plan, infrastructure requirements, and any other issues that may affect the applicant's proposal. The applicant shall request a pre-application conference with the Planning Department. With the request for a pre-application conference, the applicant shall provide the Planning Department a description of the character, location and magnitude of the proposed development and any other available supporting materials, such as maps, drawings, or models. It is the applicant's responsibility to provide sufficiently detailed plans and descriptions of the proposal for Staff to make informal evaluations regarding the proposed project.
 - (a) **Pre-Application Conference Content:** The Planning Department shall schedule a pre-application conference. At the conference, the applicant, the Planning Department or designee, and any other persons the Planning Department deems appropriate to attend shall discuss the proposed development and the applicable requirements of this Zoning Ordinance, based upon the information provided by the applicant.
 - (b) **Record of Pre-Application Conference:** The City shall be responsible for recording a summary of topics discussed at the pre-application conference.
 - (c) **Informal Evaluation Not Binding:** The informal evaluation by City Staff provided at the conference is not binding upon the applicant or the City, but are intended to serve as a guide to the applicant in making the application and advising the applicant in advance of the formal application of issues that may be presented to the appropriate decision-making body.

- (d) **Application Required Within Six (6) Months:** After a pre-application conference has been completed, the associated application must be filed within six (6) months or sooner. If an application is not filed within such timeframe, a new pre-application conference shall be required prior to filing an application.
- (3) **Application Fees:** A fee, as may be determined by the Common Council, is required for development applications.
- (4) **Forms of Application:** Applications for procedures/developments under this Subchapter shall be submitted in a form as required by the Planning Department. Applicants shall be informed in writing by the City Planner if an application is incomplete.
- (5) **Development Review Fee – Recovery of Costs:** The City Planner, City Engineer and City Attorney, and other City staff, may expend time in the investigation, reviewing and processing applications. In addition to City staff involvement, the City may retain the services of professional consultants including, but not limited to engineers, landscape architects, architects, attorneys, environmental specialists, and recreation specialists in the administration, investigation and processing of such matters. Any person, firm or corporation requesting action by the City on any and all applications shall reimburse the City for Staff time expended in the administration, investigation and processing of applications for such amendments and the cost to the City charged by any professional consultant retained by the City on any such matter. Notice shall be provided to the property owner or representative of the property owner informing them of the City policy on reimbursement costs.
- (6) **Minor Amendments:** Unless otherwise specified in this Ordinance, minor amendments to any permit or other form of approval issued by the Zoning Administrator, Architectural Commission, Plan Commission, or Common Council under this Subchapter may be approved, approved with conditions, or denied administratively by the Zoning Administrator, and may be authorized without additional public hearings or reviews. Such minor amendments may be authorized by the Zoning Administrator as long as the development approval, as so amended, continues to comply with the standards of the Zoning Ordinance, at least to the extent of its original compliance (so as to preclude any greater deviation from the standards of this Zoning Ordinance by reason of such amendments). Minor amendments shall consist of any of the following:
- (a) Any change to any permit or other form of approval that was originally subject to final review by and was approved by the Zoning Administrator, Architectural Commission, Plan Commission or Common Council, provided that:
1. The minor amendment does not result in an increase in the approved number of dwelling units;
 2. The minor amendment does not result in a greater than five (5) percent cumulative increase in the amount of square footage of a non-residential land use or structure;
 3. The minor amendment does not result in a change in the housing mix or use mix ratio.

4. The minor amendment does not result in a change in the character of the development as determined by the Zoning Administrator.
- (7) **Major Amendments:** Amendments to any permit or other form of approval that are not determined by the Zoning Administrator to be minor amendments shall be deemed major amendments. Major amendments shall be reviewed and processed in the same manner as required for the original application for which the amendment was sought.
- (8) **Effect of Denial:** No application which has been denied (either wholly or in part) shall be resubmitted for a period of 12 months from the date of said order of denial, except on grounds of new evidence or proof of change of factors found valid by the Zoning Administrator.
- (9) **Posted Notice:** In addition to the notice requirements of the Wisconsin Statutes, whenever this Zoning Ordinance requires notice of a public hearing before the Plan Commission, the Zoning Administrator shall create and place notification signs on the subject property a minimum of seven (7) days prior to the Plan Commission hearing.
 - (a) A minimum of one (1) sign shall be placed on each street frontage. Property with multiple street frontages shall have the required sign on each street. Signs shall be placed in a visible, unobstructed location near the property line. In instances where an existing building is on the front property line, the sign may be placed in a front, street-level window or in the window of a door.
 - (b) Groups of property adjacent to one another that are being considered under the same petition shall only be required to post a single sign unless directed otherwise by the Zoning Administrator.
 - (c) The notification sign shall be left in place until final action is taken on the request for approval, unless the case is formally withdrawn by the applicant prior to a final decision. It shall be the responsibility of the applicant to periodically check the sign locations to verify that the signs remain in place and have not been vandalized or removed. The applicant shall immediately notify the Zoning Administrator of any missing or defective signs. It is unlawful for a person to alter any notification sign, or to remove it while the case is pending; however, any removal or alteration that is beyond the control of the applicant shall not constitute a failure to meet notification requirements.
- (10) **Occupancy:** Prior to the occupancy or use of a property granted approvals under the procedures of this subchapter, said use or structure shall conform to the approved plans unless stated otherwise.

Section 17.802 Zoning Ordinance Text Amendments

- (1) **Purpose:** The purpose of this Section is to provide regulations which govern the procedure and requirements for the review and approval, or denial, of proposed amendments to provisions of this Chapter.
- (2) **Initiation of Request for Amendment to the Zoning Ordinance:** Proceedings for amendment of this Chapter may be initiated by any one of the following methods:
 - (a) Application by any member of the general public;

- (b) Application by any member of City Staff
 - (c) Application of the Mayor;
 - (d) Recommendation of the Plan Commission; or
 - (e) Action of the Common Council.
- (3) **Pre-Application Conference (As required by Section 17.801(2))**
- (4) **Application Requirements:** Following the pre-application conference, the applicant shall submit an application and necessary supplemental information to the Zoning Administrator. Prior to the submittal of the Class II Official Notice regarding the application to the newspaper by the City Clerk, the Applicant shall provide the City with the complete application. Said complete application shall be comprised of all of the following:
- (a) A completed application.
 - (b) A copy of the portion of the current provisions of this Chapter which are proposed to be amended;
 - (c) A copy of the text which is proposed to replace the current text;
 - (d) Written justification for the proposed text amendment, consisting of the reasons why the Applicant believes the proposed text amendment is consistent with the objectives, goals, and policies of the City's Comprehensive Plan;
- (5) **Review by the Zoning Administrator:** The proposed text amendment shall be reviewed by the Zoning Administrator as follows:
- (a) The Zoning Administrator shall review the application and evaluate and comment on the written justification for the proposed text amendment provided in the application. The Zoning Administrator shall evaluate the application to determine whether the request is consistent with the objectives, goals, and policies of the City's Comprehensive Plan, and with the standards below:
 1. How does the proposed text amendment further the purposes and intent of this Zoning Ordinance?
 2. How does the proposed text amendment further the purposes of the general Subchapter in which the amendment is proposed to be located?
 3. Which of the following factors have arisen that are not properly addressed in the current zoning text:
 - a. The provisions of this Ordinance should be made consistent with the Comprehensive Plan;
 - b. A change has occurred in the land market, or other factors have arisen which require a new form of development, a new type of land use, or a new procedure to meet said change(s);
 - c. New methods of development or providing infrastructure make it necessary to alter this Ordinance to meet these new factors;
 - d. Changing governmental finances require amending this Ordinance in order to meet the needs of the government in terms of providing and affording public services.

4. If the proposed text amendment is concerned with the provisions of land uses or intensity, how does the proposed amendment maintain the desired overall consistency of land uses, density, land use intensities, and land use impacts within the pertinent zoning districts?
 - (b) The Zoning Administrator shall forward a report to the Plan Commission for the Commission's review and use in making its recommendation to City Council. If the Zoning Administrator determines that the proposal may be in conflict with the provisions of the City's Comprehensive Plan, the Zoning Administrator shall note this determination in the report.
- (6) **Review and Recommendation by the Plan Commission:** The City Council shall not make an amendment to the Zoning Code without allowing for a recommendation from the Plan Commission per the provisions of this Subsection.
 - (a) The Zoning Administrator shall schedule a reasonable time and place for a public hearing to consider the application within 60 days after the acceptance of the complete application as determined by the Zoning Administrator. Notice of the proposed amendment and the public hearing shall conform to the requirements of the Wisconsin Statutes. Said notice shall contain a description of the proposed text change. In addition, at least ten (10) days before said public hearing, the City Clerk shall mail an identical notice to the Applicant, and to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the jurisdiction of this Chapter. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
 - (b) Within 60 days after the public hearing (or within an extension of said period requested in writing by the Applicant and granted by the Plan Commission), the Plan Commission shall make a recommendation to the City Council stating its findings and its recommendations regarding the application as a whole. Said recommendation shall include a formal finding of facts developed and approved by the Plan Commission.
 - (c) If the Plan Commission fails to make a recommendation within 60 days after the filing of said complete application (and in the absence of an applicant approved extension), then the City Council may initiate action within 30 days after the expiration of said 60 day period. Failure to receive said recommendation from the Plan Commission shall not invalidate the proceedings or actions of City Council.
 - (d) If the Plan Commission recommends approval of an application, it shall state in the minutes its conclusion and any finding of facts supporting its conclusion as to the following: that the potential public benefits of the proposed amendment outweigh all potential adverse impacts of the proposed amendment after taking into consideration the proposal by the applicant.
- (7) **Review and Action by Common Council:** The Common Council shall consider the Plan Commission's recommendation regarding the proposed text amendment. The Council may request further information and/or additional reports from the Plan Commission, Zoning Administrator, and/or the applicant.

- (a) The Zoning Administrator shall schedule a reasonable time and place for a public hearing to consider the application within 60 days after a recommendation by the Plan Commission. Notice of the proposed amendment and the public hearing shall conform to the requirements of the Wisconsin Statutes. Said notice shall contain a description of the proposed text change. In addition, at least ten (10) days before said public hearing, the City Clerk shall mail an identical notice to the Applicant, and to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the jurisdiction of this Chapter. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
- (b) Within 60 days after the public hearing (or within an extension of said period requested in writing by the Applicant and granted by the City Council), the City Council shall take action on said application. If action is not taken within 90 days by the City Council, and no extension is granted, the application shall be approved.
- (c) If the City Council recommends approval of an application, it shall state in the minutes or in a subsequently issued written decision, its conclusion.
- (d) The City Council may take final action on the application at the time of its initial meeting, or may continue the proceedings at the Applicant's request. City Council may approve the amendment as originally proposed, may approve the proposed amendment with modifications (per the recommendations of the Zoning Administrator, the Plan Commission, authorized outside experts, or its own members), or may deny approval of the proposed amendment. If the City Council wishes to make significant changes in the proposed text amendment, as recommended by the Plan Commission, then the procedure set forth in the Wisconsin Statutes shall be followed prior to Council action. Any action to amend the provisions of the proposed amendment requires a majority vote of the Council. The City Council's approval of the requested amendment shall be considered the approval of a unique request, and shall not be construed as precedent for any other proposed amendment.

Section 17.803 Amendment of Official Zoning Map

- (1) **Purpose:** The purpose of this Section is to provide regulations which govern the procedure and requirements for the review and approval, or denial, of proposed amendments to provisions of the Official Zoning Map.
- (2) **Initiation of Request for Amendment to Official Zoning Map:** Proceedings for amendment of the Official Zoning Map may be initiated by any one of the following methods:
 - (a) Application by the property owner;
 - (b) Application by any member of City Staff;
 - (c) Application of the Mayor;
 - (d) Recommendation of the Plan Commission; or
 - (e) Action of the Common Council.
- (3) **Pre-Application Conference (As required by Section 17.801(2))**

- (4) **Application Requirements:** Following the pre-application conference, the applicant shall submit an Applications and necessary supplemental information to the Zoning Administrator. Prior to the submittal of the Class II Official Notice regarding the application to the newspaper by the City Clerk, the Applicant shall provide the City the complete application. Said complete application shall be comprised of all of the following:
- (a) A map of the subject property, including legal description, to be rezoned showing all lands for which the zoning is proposed to be amended, and all other lands within 200 feet of the boundaries of the subject property. Said map shall clearly indicate the current zoning of the subject property and its surroundings. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - (b) A map of the generalized location of the subject property in relation to the City as a whole; and
 - (c) Written justification for the proposed map amendment, consisting of the reasons why the Applicant believes the proposed map amendment is consistent with the objectives, goals, and policies of the City's Comprehensive Plan.
- (5) **Review by the Zoning Administrator:** The proposed amendment to the Official Zoning Map shall be reviewed by the Zoning Administrator as follows:
- (a) The Zoning Administrator shall review the application and evaluate and comment on the written justification for the proposed map amendment. The Zoning Administrator shall also evaluate the application to determine whether the requested is consistent with the objectives, goals, and policies of the City's Comprehensive Plan, particularly as evidenced by compliance with the standards below:
 - 1. How does the proposed map amendment further the purposes and intent of this Zoning Ordinance?
 - 2. Which of the following factors have arisen that are not properly addressed on the current Official Zoning Map?
 - a. The designations of the Official Zoning Map should be made consistent with the Comprehensive Plan;
 - b. A mistake was made in mapping on the Official Zoning Map.
 - c. Factors have changed, (such as the availability of new data, the presence of new roads or other infrastructure, additional development, annexation, or other zoning changes), making the subject property more appropriate for a different district;
 - d. Growth patterns or rates have changed, thereby creating the need for an amendment to the Official Zoning Map.
 - 3. How does the proposed amendment to the Official Zoning Map maintain the desired consistency of land uses, land use intensities, and land use impacts as related to the environs of the subject property?

- (b) The Zoning Administrator shall forward a report to the Plan Commission for the Commission's review in the making its recommendation to City Council. If the Zoning Administrator determines that the proposal may be in conflict with the provisions of the City's Comprehensive Plan, the Zoning Administrator shall note this determination in the report.
- (6) **Review and Action by the Plan Commission:** The Common Council shall not make an amendment to the Official Zoning Map without allowing for a recommendation from the Plan Commission per the provisions of this Subsection.
- (a) The Plan Commission shall schedule a reasonable time and place for a public hearing to consider the application within 60 days of acceptance of the complete application by the Zoning Administrator. Notice of the proposed amendment and the public hearing shall conform to the requirements of §62.23(7)(d), Wisconsin Statutes. Said notice and posted notice (see 17.801(9)) shall contain a description of the subject property and the proposed change in zoning. In addition, at least ten days before said public hearing, the City Clerk shall mail an identical notice to the Applicant; to all property owners within 200 feet of the boundaries of the subject property and to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the jurisdiction of this Chapter. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
- (b) Within 60 days after the public hearing, the Plan Commission shall make a recommendation to the City Council regarding the application as a whole.
- (c) If the Plan Commission fails to make a recommendation within 60 days after the filing of said complete application, then the City Council may hold a public hearing within 30 days after the expiration of said 60 day period. Failure to receive said recommendation from the Plan Commission shall not invalidate the proceedings or actions of City Council.
- (d) If the Plan Commission recommends approval of an application, it shall state in the minutes its conclusion and any facts supporting its conclusion as to the following: that the potential public benefits of the proposed amendment outweigh all potential adverse impacts of the proposed amendment after taking into consideration the proposal by the Applicant.
- (7) **Review and Action by Common Council:** The Common Council shall consider the Plan Commission's recommendation regarding the proposed amendment to the Official Zoning Map. The Council may request further information and/or additional reports from the Plan Commission, the Zoning Administrator, and/or the Applicant. The Council may take final action on the application to the Official Zoning Map at the time of its initial meeting, or may continue the proceedings at the Applicant's request. The Common Council may approve the amendment as originally proposed, may approve the proposed amendment with modifications (per the recommendations of the Zoning Administrator, the Plan Commission, authorized outside experts, public comments, or its own members) or may deny approval of the proposed amendment. If the Common Council wishes to make significant changes in the proposed amendment to the Official Zoning Map, as recommended by the Plan Commission, then the procedure set forth in the §62.23(7)(d), Wisconsin

Statutes shall be followed prior to Council action. Any action to amend the Official Zoning Map requires a majority vote of the Council. The Common Council's approval of the requested amendment shall be considered the approval of a unique request, and shall not be construed as precedent for any other proposed amendment.

Section 17.804 Planned Development District Procedures

(1) Purpose

- (a) The purpose of this Section is to provide regulations which govern the procedure and requirements for the review and approval, or denial, of Planned Developments, and to provide for the possible relaxation of certain development standards.
- (b) Planned Developments are intended to allow exemptions and modifications for redevelopment areas within the community, and for mixed use developments. Furthermore, planned developments are intended to forward both the aesthetic and economic development objectives of the City by controlling the site design and appearance, the mix of uses, and the density and intensity of development. The planned development shall require a demonstrably higher level of site design, architectural control and other aspects of aesthetic and functional excellence than normally required.
- (c) If allowed to develop simply under the general requirements of this Chapter, planned developments have the potential to create undesirable impacts on nearby properties which potentially cannot be determined except with a binding site plan, landscape plan and architectural plan, and on a case-by-case basis. In order to prevent said undesirable impacts, all Planned Developments are required to follow certain procedural requirements applicable only to Planned Developments, in addition to the general requirements of this chapter and the underlying zoning district.
- (d) The Planned Development District may also be used to accommodate the development or redevelopment of parcels consistent with the design principals of traditional neighborhoods and conservation subdivisions. Traditional neighborhood design means the compact, mixed-use neighborhood where residential, commercial, and civic buildings are within close proximity to each other. A conservation subdivision means a housing development in a setting that is characterized by compact lots and common open spaces and where natural features of land are maintained to the general extent possible. Such proposed developments may be considered for approval at locations determined by the City which would include appropriate conditions. The model Ordinance for traditional neighborhood development published by the University of Wisconsin Extension shall serve as a nonexclusive guide to assist in defining various aspects of this form of urban design along with such other sources of guidance that the Plan Commission and Common Council may choose to consult.

(2) Development Standards for Planned Developments:

- (a) **Permitted Location:** Planned developments shall be permitted with the approval of a Planned Development District, specific to the approved Planned Development, within all zoning districts.
 - (b) **Development Standards:** Exemptions to the development standards may be provided with the approval of a Planned Development:
 - (c) **Requirements to Depict All Aspects of Development:** Only development which is explicitly depicted on the required site plan approved by the Common Council as part of the approved Planned Development, shall be permitted, even if such development is otherwise listed as permitted in this Chapter. Requested exemptions from any standards shall be made explicit by the Applicant in the application, and shall be recommended by the Plan Commission and approved explicitly by the City Council. If not so requested and approved, such exemptions shall not be permitted.
- (3) **Initiation of Request for Approval of a Planned Development:** Proceedings for approval of a Planned Development shall be initiated by
- (a) Application by the property owner.
- (4) **PD Process Step 1: Pre-Application Conference (As required by Section 17.801(2))**
- (5) **PD Process Step 2: Concept Plan (Optional)**
- (a) The Applicant may provide the Zoning Administrator with a draft PD Concept Plan for Plan Commission and Common Council review. This submittal packet may contain all of the following items:
 - 1. A location map of the subject property and its vicinity;
 - 2. A general written description of proposed PD including:
 - a. general project themes and images;
 - b. the general mix of dwelling unit types and/or land uses;
 - c. approximate residential densities and non-residential intensities as described by dwelling units per acre, floor area ratio and impervious surface area ratio;
 - d. the general treatment of natural features;
 - e. the general relationship to nearby properties and public streets;
 - f. the general relationship of the project to the Master Plan;
 - g. an initial draft list of zoning standards which will not be met by the proposed PD and the location(s) in which they apply.
 - 3. A conceptual plan drawing of the general land use layout and the general location of major public streets and/or private drives.
 - (b) Once the Zoning Administrator has received a complete submittal, the proposed PD Concept Plan shall be placed on the Plan Commission agenda.
 - (c) At the Plan Commission meeting, the Applicant shall engage in an informal discussion with the Plan Commission regarding the conceptual PD.

- (d) Points of discussion and conclusions reached in this stage of the process shall be in no way be binding upon the Applicant or the City, but should be considered as the informal, non-binding basis for proceeding to the next step.
- (e) The Plan Commission may make a finding that the tentative planned development project is consistent with the City's adopted plans and give the development a "preliminary favorable opinion," but such opinion is not required. The applicant may also be scheduled to present the PD concept plan at a Common Council meeting.

(6) PD Process Step 3: General Development Plan (GDP)

- (a) The Applicant shall provide the Zoning Administrator with a draft GDP Plan Submittal for a determination of completeness prior to placing the proposed GDP on the Plan Commission agenda for GDP review. This submittal packet shall contain all of the following items, prior to its acceptance by the Zoning Administrator and placement of the item on a Plan Commission agenda for GDP review:
 - 1. A location map, including legal description, of the subject property and its vicinity;
 - 2. A map of the subject property showing all lands for which the planned development is proposed, and all other lands within 200 feet of the boundaries of the subject property. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - 3. A general written description of proposed PD including:
 - a. general project themes and images;
 - b. the general mix of dwelling unit types and/or land uses;
 - c. approximate residential densities and non-residential intensities as described by dwelling units per acre, floor area ratio and impervious surface area ratio;
 - d. the general treatment of natural features;
 - e. the general relationship to nearby properties and public streets;
 - f. the general relationship of the project to the Master Plan,
 - g. a Statement of Rationale as to why PD zoning is proposed. This shall identify barriers that the Applicant perceives in the form of requirements of standard zoning districts and opportunities for community betterment the Applicant suggests are available through the proposed PD zoning.
 - h. a complete list of zoning standards which will not be met by the proposed PD and the location(s) in which they apply shall be identified. Significant public benefits shall be a consideration in the GDP approval. "Green field" planned developments (as opposed to redevelopment sites) shall show significantly greater public benefits. Also, the greater the extent of modifications and exemptions, the greater the public benefit should be demonstrated.

- i. a written description of potentially requested exemption from the requirements of the underlying zoning district.
 - j. if the PD proposes a development of mixed compatible uses, a statement setting forth how the mix of uses will serve to implement the City's adopted comprehensive plan, or a specifically adopted component of the comprehensive plan and the purposes of zoning ordinance shall be required.
4. A General Development Plan drawing at a minimum scale of 1"=100' of the proposed project showing at least the following information in sufficient detail to make an evaluation against criteria for approval:
 - a. a conceptual plan drawing of the general land use layout and the general location of major public streets and/or private drives.
 - b. location of recreational and open space areas and facilities and specifically describing those that are to be reserved or dedicated for public acquisition and use;
 - c. statistical data on minimum lot sizes in the development, the approximate areas of large development lots and pads, density/intensity of various parts of the development, floor area ratio, impervious surface area ratio and landscape surface area ratio of various land uses, expected staging, and any other plans.
5. A general conceptual landscaping plan for the subject property, noting approximate locations of foundation, street, yard and paving, landscaping, and the compliance of development with all landscaping requirements of this Chapter and the use of extra landscaping.
6. A general signage plan for the project, including all project identification signs and concepts for public fixtures and signs (such as street light fixtures and/or poles or street sign faces and/or poles) which are proposed to vary from City standards or common practices.
7. Written justification for the proposed Planned Development, including:
 - a. How is the proposed PD (in general) consistent with the purposes, goals, objectives, policies and standards of the City's Comprehensive Plan, and in harmony with the Zoning Ordinance, and any other plan, program or ordinance of the City?
 - b. How is the proposed PD (in its specific location) consistent with the purposes, goals, objectives, policies and standards of the City's Comprehensive Plan, and in harmony with the Zoning Ordinance, and any other plan, program or ordinance of the City?
 - c. Does the proposed PD result in a substantial or undue adverse impact on nearby property, the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property of rights-of-way, or other matters affecting the public health, safety or general welfare, either as they now exist or as they may in the future be developed?

- d. Does the PD maintain a desired consistency of land uses, land use intensities, and land use impacts as related to the surroundings of the proposed PD?
 - e. Is the PD in an area that will be adequately served by, and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public agencies serving the property?
 - f. Do the public benefits of the proposed PD outweigh any potential adverse impacts of the PD after taking into account the public benefits?
8. All planned developments which result in the new construction of buildings, façade changes, or any architectural modification to a building shall be reviewed by the Architectural Commission prior to the planned development being reviewed by the Plan Commission. The Architectural Commission shall provide a recommendation to the Plan Commission.
 9. A public hearing shall be held before the Plan Commission.
 10. Following the public hearing, the Plan Commission shall make written findings regarding whether the developer has favorably complied with the findings listed in this Section and shall recommend approval, modification, or denial of the proposed planned development. The Plan Commission shall determine whether the public benefit to the City will equal or exceed the exemptions requested by the applicant.
 11. Upon favorable finding(s) by the Plan Commission, a draft PD ordinance shall be prepared for consideration by the Common Council.
 12. The Common Council shall consider comments and recommendations made by the Plan Commission regarding the public benefit to the City and conformance to the adopted Comprehensive Plan and adopted economic development plans. A public hearing on the proposed GDP shall be held before action on the GDP is taken by the Common Council.
 13. The applicant shall submit proof of financing capability pertaining to the construction and maintenance and operation of public works elements of the proposed development.
 14. All portions of an approved PD/GDP shall be developed within a time period specified by the Common Council. The Common Council may extend the time period of a planned development after a public hearing at the Plan Commission, and recommendation from the Plan Commission.

(7) Implementation of Planned Developments:

- (a) The implementation of planned developments including the construction of buildings, infrastructure, landscaping, and other site plan improvements will be reviewed and approved by the City to ensure conformance with the approved general development plan. The approval process for planned developments is required to follow the development review procedural requirements of this Sub-Chapter.

(8) Amendments to Planned Developments:

- (a) Minor Amendments: As determined by the City Planner, minor changes and amendments to a planned development shall be administratively approved by the City Planner. Minor changes can include changes to building façade or site plan that are deemed insignificant and immaterial.
- (b) Major Amendments: As determined by the City Planner, major amendments to planned developments shall be processed and reviewed as a new general development plan.

Section 17.805 Design Review

(1) Purpose

- (a) The purpose of the design review process is to ensure compliance with the development and design standards of the Zoning Ordinance prior to the issuance of a building permit or concurrent with other required permits and to encourage quality development reflective of the goals and objectives of the Comprehensive Plan.

(2) Applicability: Design review is required for:

- (a) All non-residential development;
- (b) All new multi-family residential development including townhomes, and apartments;
- (c) Any change of use from one primary use classification to another (for example, residential use to commercial use);
- (d) Any expansion of existing development, not including single-family or duplex dwellings; and
- (e) All publicly owned and operated buildings.

(3) Types of Design Review

- (a) Administrative Design Review: The following types of projects may be approved by the Planning Department through the Administrative Design Review Process:
 - 1. Any expansion of an existing development, not including single-family or duplex dwellings, or new construction that results in a building footprint not exceeding 5,000 square feet. The changes may also include façade changes and exterior alterations.
- (b) Major Design Review: Any development, with exception of single-family detached or duplex dwellings, that exceed the size threshold for Administrative Design Review approval shall require approval by the Architectural Commission and Plan Commission. For properties zoned Mixed Commercial (MC), all exterior building changes, include façade/roof changes, building additions and new construction, regardless of the size, shall be reviewed and approved by the Architectural Commission. In the IRM and IRS Districts, the Architectural Commission shall approve or deny all new construction and major renovations (which in the opinion of the Zoning Administrator are significant).

- (4) **Procedure for Administrative Design Review:** The following procedures shall apply to Administrative Design Reviews:
- (a) Pre-Application Conference (As required by Section 17.801(2))
 - (b) The Zoning Administrator shall review each Administrative Design Review application based on the approval criteria listed below and shall act to approve, approve with conditions, or deny the application. The Zoning Administrator also may refer the decision to the Architectural Commission and Plan Commission to be processed under the Major Design Review Procedure.
 - (b) Approval Criteria: The Zoning Administrator shall approve an Administrative Design Review application if all of the following are met:
 - 1. The development plan complies with all applicable development and design standards set forth in this Zoning Ordinance;
 - 2. The development plan is consistent with any previously approved subdivision plat, planned development, or any other precedent plan or land use approval as applicable; and
 - 3. The development plan is consistent with the Comprehensive Plan and other adopted City policies, including adopted transportation, neighborhood, and redevelopment plans; and
 - 4. The development plan will not substantially alter the basic character of the surrounding area or jeopardize the development or redevelopment of the area.
 - (c) Lapse of Approval: The design review approval shall be effective for a period of two (2) years from the date of approval, unless stated otherwise. Building permits shall not be issued based on design review approvals that have an approval date of more than two (2) years old.
- (5) **Procedures for Major Design Review:** The following procedures shall apply to Major Design Reviews
- (a) Pre-Application Conference (As required by Section 17.801(2))
 - (b) Application Requirements: Following the pre-application conference, the applicant shall submit an application and necessary supplemental information to the Zoning Administrator. A complete application shall consist of all of the following items:
 - 1. A map of the subject property showing all lands for which design review is proposed, and all other lands within 200 feet of the boundaries of the subject property. Said map shall clearly indicate the current zoning of the subject property and its surroundings, and the jurisdiction(s) which maintains that control. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - 2. A map, such as the Land Use Plan Map, of the generalized location of the subject property in relation to the City as a whole;

3. A written description of the proposed site plan changes describing the type of activities, buildings, and structures proposed for the subject property and their general locations;
 4. A site plan, plan of operation, architectural drawings, and other supplemental information as required by the Zoning Administrator for the development as proposed.
- (c) Zoning Administrator Review: The Zoning Administrator shall review each Major Design Review application based on the approval criteria listed below and provide a recommendation to the Architectural Commission and Plan Commission based on his/her findings.
- (d) Approval Criteria: The Architectural Commission may approve or deny a major design review application. Approved design reviews shall be forwarded to the Plan Commission for review. Approvals shall meet the following criteria:
1. The development's architecture is consistent with all applicable development and design standards set forth in this Zoning Ordinance; and
 2. The development's architecture will not substantially alter the basic character of the surrounding area or jeopardize the development or redevelopment of the area.
- (e) Approval Criteria: The Plan Commission may approve a Major Design Review application if all of the following criteria are met:
1. The development plan is consistent with the intent of the Comprehensive Plan and all other adopted City Plans;
 2. The development plan complies with all applicable development and design standards set forth in this Zoning Ordinance;
 3. The development plan will not substantially alter the basic character of the surrounding area or jeopardize the development or redevelopment of the area; and
 4. The development plan is consistent with any previously approved subdivision plat, planned development, or any other previous plan or land use approval as applicable.

Section 17.806 Conditional Use Review and Approval

(1) Purpose

- (a) The purpose of this Section is to provide regulations which govern the procedure and requirements for the review and approval, or denial, of proposed conditional uses.
- (b) Certain uses in situations which are of such a special nature, or are so dependent upon actual contemporary circumstances, as to make impractical the predetermination of permissibility, or the detailing in this Chapter of specific standards, regulation, or conditions which would permit such determination in each individual situation, may be permitted as conditional uses. In considering the grant of a conditional use permit, special emphasis shall be given to

whether the conditional use negatively impacts the public health, safety, welfare, or morals of the community. The conditional use standards set forth in Section 17.807(6)(a) shall be considered.

- (c) Under this Chapter, a proposed Conditional Use shall be denied unless the Applicant can demonstrate, to the satisfaction of the City that the proposed Conditional Use will not create undesirable impacts on nearby properties, the environment, or the community as a whole.
- (2) **Initiation & Procedure for Approval of a Conditional Use:** Proceedings for approval of a conditional use permit may be initiated by an application by the owner's of the subject property.
 - (3) **Pre-Application Conference (As required by Section 17.801(2))**
 - (4) **Application for Conditional Use Review by Zoning Administrator:** The petitioner shall apply to the Zoning Administrator for the scheduling of an appearance before the Plan Commission. The Zoning Administrator shall notify the petitioner of the date and time of the applicable Plan Commission meeting.
 - (1) **Application Requirements:** Prior to the submittal of the Class II Official Notice regarding the application to the newspaper by the City Clerk, the Applicant shall provide the City Clerk with the complete application and supplemental information as certified by the Zoning Administrator. Said complete application shall be comprised of all of the following:
 - (a) A map of the subject property showing all lands for which the conditional use is proposed, and all other lands within 200 feet of the boundaries of the subject property. Said map shall clearly indicate the current zoning of the subject property and its surroundings, and the jurisdiction(s) which maintains that control. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - (b) A map, such as the Land Use Plan Map, of the generalized location of the subject property in relation to the City as a whole;
 - (c) A written description of the proposed conditional use describing the type of activities, buildings, and structures proposed for the subject property and their general locations;
 - (d) A site plan and plan of operation of the development as proposed.
 - (e) Written justification for the proposed conditional use consisting of the reasons why the applicant believes the proposed Conditional Use is appropriate.
 - (6) **Review by the Zoning Administrator:** The proposed conditional use shall be reviewed by the Zoning Administrator as follows:
 - (a) The Zoning Administrator shall review the application and evaluate and comment on the written justification for the proposed conditional use as follows:
 - 1. How is the proposed conditional use (the use in general, independent of its location) in harmony with the purposes, goals, objectives, policies and standards of the City's Comprehensive Plan, this Chapter, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the City?

2. How is the proposed conditional use (in its specific location) in harmony with the purposes, goals, objectives, policies and standards of the City's Comprehensive Plan, this Chapter, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the City?
 3. Does the proposed conditional use, in its proposed location and as depicted on the required site plan result in a substantial or undue adverse impact on nearby property, the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property or right-of-way, or other matters affecting the public health, safety, or general welfare, either as they now exist or as they may in the future be developed as a result of the implementation of the provisions of this Chapter, the Comprehensive Plan, or any other plan, program, map, or ordinance adopted or under consideration pursuant to official notice by the City or other governmental agency having jurisdiction to guide development?
 4. Does the proposed conditional use maintain the desired consistency of land uses, land use intensities, and land use impacts as related to the environs of the subject property?
 5. Is the proposed conditional use located in an area that will be adequately served by, and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public agencies serving the subject property?
 6. Do the potential public benefits of the proposed conditional use outweigh all potential adverse impacts of the proposed conditional use after taking into consideration the Applicant's proposal and any requirements recommended by the Applicant to ameliorate such impacts?
 7. Will the proposed conditional use create adverse impacts such as dust, lighting, air pollution, noise, odor, vibration, glare, heat, hazardous materials, or traffic?
 8. Will the proposed conditional use negatively affect the health, safety, welfare and morals of the general public?
- (b) The Zoning Administrator shall forward a report to the Plan Commission for the Commission's review and use in taking its final action. If the Zoning Administrator determines that the proposal may be in conflict with the provisions of the City's Comprehensive Plan, the Zoning Administrator shall note this determination in the report.
- (7) Public Hearing and Preliminary Recommendation by the Plan Commission**
- (a) The Plan Commission shall schedule a reasonable time and place for a public hearing to consider the application within 60 days after the acceptance of the complete application as determined by the Zoning Administrator. Said notice shall contain a description of the subject property and the proposed conditional use. In addition, at least ten days before said public hearing, the City Clerk shall mail an identical notice to the Applicant; to all property owners within 200 feet of

the boundaries of the subject property and to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the jurisdiction of this Chapter. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.

- (b) The City shall transmit a copy of each public hearing notice for a conditional use located within 1,000 feet of a navigable waterway, to the Wisconsin Department of Natural Resources for review and comment at least ten (10) days prior to any public hearing.
 - (c) Within 60 days after the public hearing (or within an extension of said period requested in writing by the Applicant and granted by the Plan Commission), the Plan Commission shall make its recommendations regarding the application as a whole. If the Plan Commission makes a favorable recommendation, it shall state in the minutes and in the subsequently issued written report, its conclusion and any finding of facts supporting its conclusion as to the following: that the potential public benefits of the proposed conditional use outweigh all potential adverse impacts of the proposed conditional use, after taking into consideration the proposal by the Applicant.
 - (d) After a recommendation by the Plan Commission, City Staff shall prepare a written report for Common Council review and shall draft a conditional use permit with necessary conditions for Common Council consideration.
- (8) **Review of the Plan Commission's Recommendations by the Common Council:** The City Council shall review the Plan Commission's preliminary findings regarding the proposed conditional use. The City Council may request further information and/or additional reports from the Plan Commission, Zoning Administrator, City Staff and/or the Applicant. If the Common Council concurs with the recommendation of the Plan Commission, it may take action on the application at the time of its initial consideration of the Plan Commission's recommendation and draft conditional use permit, or may continue the proceedings at its discretion or at the Applicant's request. The Common Council may approve the conditional use as originally proposed, may approve the proposed conditional use with modifications (per the recommendations of the Plan Commission, Zoning Administrator, the applicant, other City staff, authorized outside experts, general public, or its own members) or may deny approval of the proposed conditional use. Any action to amend the provisions of the proposed conditional use requires a majority vote of the Common Council. The Common Council's approval of the proposed conditional use shall be considered the approval of a unique request, and shall not be construed as precedent for any other proposed conditional use.
- (9) **Effect of Denial:** No application which has been denied (either wholly or in part) shall be resubmitted for a period of 12 months from the date of said order of denial, except on grounds of new evidence or proof of change of factors found valid by the Zoning Administrator.
- (10) **Review for Compliance:** The City may conduct an investigation to ensure that the permittee is maintaining the use as applied for, in compliance with all conditions, and has not converted or modified the use. Failure to operate in accordance with the conditions of the conditional use permit shall be the subject of an enforcement

action and civil penalties and/or grounds for setting the matter for public hearing to consider revocation of the permit. The election of civil penalties shall in no way act as a waiver of the revocation of the permit. The City may also pursue any other option permitted by law to require compliance with the conditions of the permit.

(11) Revocation of Conditional Use Permits:

- (a) The Plan Commission, upon the direction of the City Council, shall hold a public hearing to consider the revocation of a conditional use permit granted in accordance with the provisions of this Chapter.
- (b) Written notice of the date, time, place, and purpose of such public hearing shall be served on the owner of the property for which the permit was granted by registered mail, postage prepaid, return receipt requested, not less than ten (10) days prior to the date of such hearing. Additional notice shall be given in the manner prescribed in this Chapter governing notices of conditional use permits.
- (c) A conditional use permit may be revoked if, from the facts presented at the public hearing or by investigation, the Plan Commission finds any one (1) or more of the following grounds:
 1. That the permit approval was obtained by fraud;
 2. That the permit granted is being or has been exercised contrary to the conditions of such permit or in violation of any applicable licenses, permits, regulations, laws, or ordinances; and
 3. That the use for which the permit approval was granted is being or has been exercised as to be detrimental to the public health or safety or so as to constitute a nuisance.
- (f) The Plan Commission shall provide a recommendation to the Common Council after the affirmative votes of a majority of the membership of the Plan Commission, such membership being based upon membership present and voting. The Plan Commission shall forward its findings to the Common Council
- (g) The Common Council, after receiving a recommendation from the Plan Commission, shall consider the revocation of a conditional use permit. The Common Council may affirm or modify the recommendation of the Plan Commission. Each decision by the Common Council to revoke a conditional use permit shall be by the affirmative votes of a majority of the Common Council. The Common Council shall mail a notice of its decision to the owner of the property involved. The Common Council may, after a public hearing has been held in the manner prescribed in this Section, affirm, reverse, or modify the decision of the Plan Commission.

- (12) Time Limits on the Development of Conditional Use:** The start of construction of all conditional uses shall be initiated within 365 days of their approval by City Council and shall be operational within 730 days of said approval. Failure to initiate development within this period shall automatically constitute a revocation of the conditional use. Prior to such a revocation, the Applicant may request an extension of this period. Said request shall require formal approval by Plan Commission and shall be based upon a showing of acceptable justification (as determined by Plan Commission).

- (13) **Discontinuing an Approved Conditional Use:** All conditional uses which have been discontinued for a period exceeding 365 days shall have their conditional use invalidated automatically. The burden of proof shall be on the property owner to conclusively demonstrate that the subject conditional use was operational during this period.
- (14) **Change of Ownership:** All requirements of the approved conditional use shall be continued regardless of ownership of the subject property. Modification, alteration, or expansion of any conditional use in violation as approved without approval by Plan Commission, shall be grounds for revocation of said conditional use approval.

Section 17.807 Temporary Use Review and Approval

(1) **Purpose**

- (a) The purpose of this Section is to provide regulations which govern the procedure and requirements for the review and approval of proposed temporary uses.

- (2) **Regulations Applicable to All Temporary Uses:** No public hearing is required to grant a temporary use, however, a demonstration that the applicant proposes to meet all temporary use requirements of Section 17.113 must be made at time of site plan application.

(3) **Pre-Application Conference (As required by Section 17.801(2))**

- (4) **Application Requirements:** All applications for temporary use permits shall be filed at least four (4) weeks prior to the date of the temporary use will commence. Said complete application shall be comprised of all of the following:

- (a) A map of the subject property showing all lands for which the temporary use is proposed.
- (b) A written description of the proposed temporary use describing the type of activities, buildings, and structures proposed for the subject property and their general locations; and,
- (c) A site plan of the subject property as proposed for development.

- (5) **Approval and Duration of Activity:** The Zoning Administrator may approve, approve with conditions, or deny the application based on the approval criteria, and limit the duration of a temporary use in terms of the number of days per occurrence, the number of occurrences per year, and may provide for permit renewal.

- (6) **Approval Criteria:** The Zoning Administrator shall issue a temporary use permit only upon finding that the proposed temporary use satisfies the requirements of the Zoning Ordinance and further promotes the goals and objectives on the City's Comprehensive Plan.

Section 17.808 Variances

- (1) **Purpose:** The purpose of this Section is to provide regulations which enable the City to hear and decide requests for variations from the terms of this Chapter as will not be contrary to the public interest; where owing to special factors, a literal enforcement of the provisions of this Chapter would result in practical difficulty or

unnecessary hardship, so that the spirit of this Chapter shall be observed, public safety and welfare secured, and substantial justice done.

- (2) **Initiation of Request for Approval of a Variance:** Proceedings for approval of a requested variance shall be initiated by an application of the owner(s) of the subject property.
- (3) **Application Requirements:** Prior to the submittal of the Class II Official Notice regarding the application to the newspaper by the City Clerk, the Applicant shall provide the City with the complete application. Said complete application shall be comprised of all of the following:
 - (a) A map of the subject property showing all lands for which the variance is proposed, and all other lands within 200 feet of the boundaries of the subject property. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - (b) A map of the generalized location of the subject property in relation to the City as a whole;
 - (c) A written description of the proposed variance describing the type of specific requirements of the variance proposed for the subject property;
 - (d) A site plan of the subject property as proposed for development;
 - (e) Written justification for the requested variance consisting of the reasons why the Applicant believes the proposed variance is appropriate; and
 - (f) Written alternatives for the proposal such as other locations, designs, and construction techniques. If such alternatives exist, explain why they have been rejected.
- (4) **Review by the Zoning Administrator:** The requested variance shall be reviewed by The Zoning Administrator as follows:
 - (a) The Zoning Administrator shall review the application and evaluate and comment on the written justification for the proposed variance provided in the application. The Zoning Administrator shall also evaluate the application to determine whether the request is in harmony with the recommendations of the City's Comprehensive Plan and with the standards of below:
 1. What exceptional or extraordinary circumstances or special factors or unique property limitations are present which apply only to the subject property? In what manner do the factors listed prohibit the development of the subject property?
 2. Would granting the proposed variance be a substantial detriment to the public interest?
 3. Would granting of the proposed variance result in a substantial or undue adverse impact on the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property, or other matters affecting the public health, safety, or general welfare?
 4. Have factors which present the reason for the proposed variance been created by the act of the applicant or previous property owner or their agent?

5. Would compliance with the Ordinance unreasonably prevent the owner from using the property for a permitted purpose or would conformity with the Ordinance create an unnecessary burden on the property owner?

- (b) The Zoning Administrator shall forward a report to the Zoning Board of Appeals for the Board's review and action. If the Zoning Administrator determines that the proposal may be in conflict with the provisions of the City's Zoning Ordinance and Comprehensive Plan, the Zoning Administrator shall note this determination in the report.

(5) Review and Determination by Zoning Board of Appeals

- (a) Within 60 days after filing of the complete application as determined by the Zoning Administrator, the Zoning Board of Appeals shall hold a public hearing. Notice of the requested variance and the public hearing shall conform to the requirements of Wisconsin Statutes. Said notice shall contain a description of the subject property and the proposed variance. In addition, at least ten days before said public hearing, the City Clerk shall mail an identical notice to the Applicant of the proposed variance; to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the subject property; and to all property owners within 200 feet of the boundaries of the subject property. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
- (b) Within 30 days after holding the public hearing (or, within an extension of said period approved by the Applicant and granted by the Zoning Board of Appeals), the Zoning Board of Appeals make its findings and its determination regarding the application as a whole. The Zoning Board of Appeals may request further information and/or additional reports from the Zoning Administrator and/or the Applicant. The Zoning Board of Appeals may take final action on said request for approval of the requested variance at time of its initial meeting, or said proceedings may be continued from time-to-time for further consideration. The Zoning Board of Appeals shall make a written report of its findings and determinations following its determination.
- (c) Said report shall include a formal findings of facts developed and approved by the Zoning Board of Appeals.
- (6) **Effect of Denial:** No application for a variance which has been denied (either wholly or in part) shall be resubmitted for a period of 12 months from the date of said order of denial, except on grounds of new evidence or proof of change of factors found valid by the Zoning Administrator.
- (7) **Limited Effect of a Variance:** Where the Zoning Board of Appeals has granted a variance, such approval shall neither change the use classification of the building or premises, nor give it any status as a nonconforming use other than that which it has as a result of the variance. Granting of a variance shall be considered as unique to the variance granted, and shall not be construed as precedent for any other proposed variance.

- (8) **Notice to the DNR:** The Zoning Board of Appeals shall transmit a copy of each public hearing notice for a variance located within 1,000 feet of any lake, river, or stream, to the Wisconsin Department of Natural Resources.

Section 17.809 Special Exceptions

- (1) **Purpose:** In all Zoning Districts, minimum side yard setbacks, minimum rear yard setbacks, and minimum road setbacks may be reduced by special exception. Reduced shore yard setbacks shall not be considered under this section.
- (2) **Initiation of Request for Approval of a Special Exception:** Proceedings for approval of a requested special exception shall be initiated by an application of the owner(s) of the subject property.
- (3) **Application Requirements:** Prior to the submittal of the Class II Official Notice regarding the application to the newspaper by the City Clerk, the Applicant shall provide the City Clerk copies of the complete application. Said complete application shall be comprised of all of the following:
- (a) A map of the subject property showing all lands for which the special exception is proposed, and all other lands within 200 feet of the boundaries of the subject property. Said map shall clearly indicate the current zoning of the subject property and its surroundings. All lot dimensions of the subject property, a graphic scale, and a north arrow shall be provided;
 - (b) A map, such as the Land Use Plan Map, of the generalized location of the subject property in relation to the City as a whole;
 - (c) A written description of the proposed special exception describing the specific requirements of the special exception proposed for the subject property;
 - (d) A site plan of the subject property as proposed for development.
 - (e) Written justification for the requested special exception consisting of the reasons why the Applicant believes the proposed special exception is appropriate.
- (4) **Review by the Zoning Administrator:** The requested special exception shall be reviewed by the Zoning Administrator as follows:
- (a) The Zoning Administrator shall review the application and evaluate and comment on the written justification for the proposed special exception provided in the application. A special exception is not a variance as the applicant does not need to show any unnecessary hardship or unique property limitations with the request. The Zoning Administrator shall also evaluate the application to determine whether the request is in harmony with the recommendations of the City's Comprehensive Plan and with the standards of below:
 - 1. Would granting the proposed special exception be a substantial detriment to the public interest?
 - 2. Would granting of the proposed special exception result in a substantial or undue adverse impact on the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property, or other matters affecting the public health, safety, or general welfare?

3. Have factors which present the reason for the proposed special exception been created by the act of the applicant or previous property owner or their agent?

(5) **Review and Determination by the Board of Zoning Appeals**

- (a) Within 60 days after filing of the complete application the Board of Zoning Appeals shall hold a public hearing. Notice of the requested special exception and the public hearing shall conform to the requirements of the Wisconsin Statutes. Said notice shall contain a description of the subject property and the proposed special exception. In addition, at least ten days before said public hearing, the City Clerk shall mail an identical notice to the Applicant of the proposed special exception; to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the subject property; and to all property owners within 200 feet of the boundaries of the subject property. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
 - (b) Within 30 days after the holding of the public hearing (or, within an extension of said period approved by the Applicant and granted by the Board of Zoning Appeals), the Board of Zoning Appeals shall make its determination regarding the application as a whole. The Board of Zoning Appeals may request further information and/or additional reports from The Zoning Administrator and/or the Applicant. The Board of Zoning Appeals may take final action on said request for approval of the requested special exception at the time of its initial meeting, or said proceedings may be continued for further consideration. The Board of Zoning Appeals shall make a written report of its findings and determinations.
- (6) **Effect of Denial:** No application for a special exception which has been denied (either wholly or in part) shall be resubmitted for a period of 12 months from the date of said order of denial, except on grounds of new evidence or proof of change of factors found valid by the Zoning Administrator.
- (7) **Limited Effect of a Special Exception:** Where the Board of Zoning Appeals has granted a special exception, such approval shall neither change the use classification of the building or premises, nor give it any status as a nonconforming use other than that which it has as a result of the special exception. Granting of a special exception shall be considered as unique to the special exception granted, and shall not be construed as precedent for any other proposed special exception. The special exception shall remain valid for the life of the structure.

Section 17.810 Appeals of Zoning Administrator Interpretations

- (1) **Purpose:** The purpose of this Section is to provide regulations which enable the City to hear and decide requests for appeals from the interpretations of the Zoning Administrator or other public officials.
- (2) **Initiation of Request for Review of Zoning Interpretation:** Proceedings for the review of an appeal may be initiated by any person aggrieved, or by any officer, department, board, or bureau of the City affected by any decision of the Zoning Administrator.

- (3) **Time Limit for Filing an Appeal:** Any appeal of an interpretation under the provisions of this Section shall be made within a period not exceeding 45 days from the date of issuance of the interpretation by the Zoning Administrator. Failure to initiate this appeal procedure within this 45 day period shall constitute a final and binding waiver of the right to appeal said interpretation.
- (4) **Application Requirements:** All applications for review of an interpretation, shall be filed in the office of the Zoning Administrator. Said complete application shall be accompanied by all of the following:
 - (a) A copy of pertinent items in the file on the matter maintained by the Zoning Administrator, as identified by the Zoning Administrator and/or the Applicant; and
 - (b) A written statement from the Applicant indicating the reasons why an appeal is justified based upon an analysis of the Zoning Administrator's interpretation. This statement shall be dated and signed by the Applicant.
- (5) **Review by the Zoning Administrator:** The submitted appeal shall be reviewed by The Zoning Administrator in the following steps:
 - (a) The Zoning Administrator shall review the application and shall evaluate and comment on the written justification for the appeal to the Zoning Board of Appeals as submitted by the Applicant. The Zoning Administrator shall also evaluate the application to determine whether the requested is in harmony with the recommendations of the City's Comprehensive Plan.
 - (b) The Zoning Administrator shall forward a report to the Zoning Board of Appeals for review and action. If the Zoning Administrator determines that the proposal may be in conflict with the provisions of the City's Comprehensive Plan or Zoning Ordinance, the Zoning Administrator shall note this determination in the report. The Zoning Administrator shall provide a report on the rational for this basis of his/her interpretation.
- (6) **Review and Action by the Zoning Board of Appeals**
 - (a) Within 60 days after the filing of the complete application the Zoning Board of Appeals shall schedule a reasonable time and place for a public hearing to consider the application. Notice of the appeal and said public hearing shall conform to Wisconsin Statutes. Said notice shall contain a description of the issue. At least ten days before said public hearing, the City Clerk shall mail an identical notice to the Applicant; to the Clerk of any municipality whose boundaries are within 1,000 feet of any portion of the jurisdiction of this Chapter; and to any property owner within 200 feet of the subject property. Failure to mail said notice, provided it is unintentional, shall not invalidate proceedings under this Section.
 - (b) Within 60 days after the filing of the complete application as determined by the Zoning Administrator, the Zoning Board of Appeals makes its findings. The Zoning Board of Appeals may request further information and/or additional reports from The Zoning Administrator and/or the Applicant. The Zoning Board of Appeals may take final action on the application for appeal at the time of its

initial meeting, or may continue the proceedings at Applicant's request. Said final action shall be followed by a written report which shall include a formal finding of facts developed and approved by the Zoning Board of Appeals concerning the request.

- (c) If the Zoning Board of Appeals fails to make a determination within 60 days after the filing of said complete application, the zoning administrator's interpretation is affirmed.
- (7) **Effect of Denial:** No application for an appeal which has been denied (either wholly or in part) shall be resubmitted for a period of 12 months from the date of said order of denial, except on grounds of new evidence or proof of change of factors found valid by the Zoning Administrator.
- (8) **Limited Effect of a Favorable Ruling on an Appeal**
 - (a) No ruling by the Zoning Board of Appeals on an appeal finding a particular land use to be permitted or conditionally permitted in a specified zoning district shall be valid for a period of more than 365 days from the date of issuance of the ruling on the appeal, unless a building permit is issued and development is actually begun within that period, and is thereafter diligently pursued to completion, or a Certificate of Occupancy is obtained and a use commenced within that period.

Section 17.811 Violations and Penalties

- (1) **Violation of this Chapter:** It shall be unlawful to construct or use any land, engage in any development activity or construct or use any structure, land or water in violation of any of the provisions of this Chapter, or otherwise neglect, refuse or fail to comply with this Chapter's requirements, or fail to obtain necessary building permits or development approvals. Any person who violates or fails to comply with any of the provisions of this Chapter shall, upon conviction thereof, be subject to the penalties and in addition, shall pay all costs and expenses, including actual reasonable attorney and other fees involved in the case. Each day a violation exists or continues shall constitute a separate offense.
- (2) **Penalties:** Any person, firm, or corporation who fails to comply with the provisions of this Code or any order of the Zoning Administrator shall, upon conviction thereof, forfeit not less than \$10.00 nor more than \$200.00 and costs of prosecution for each violation and in default of payment of such forfeiture and costs shall be imprisoned in the County Jail until payment thereof, but not exceeding 30 days. Each day a violation exists or continues shall constitute a separate offense.
- (3) **City Promulgated Correction of Violation:** In addition to any other penalty imposed by this Subchapter for a violation of the provisions of this Chapter, the City reserves and maintains the continued right to abate violations of this Chapter.
 - (a) **Hazardous Condition Caused by Violation of this Chapter:** If the Zoning Administrator determines that a violation of this Chapter exists, and further determines that the nature of such violation poses a great and immediate danger to the public health, safety, peace, morals or decency, the Zoning Administrator shall cause the violation to be abated. Costs associated with said abatement shall be charged to the owner of the property on which said violation

has occurred. The Zoning Administrator is hereby authorized to abate a violation of this Chapter.

- (b) **Nonhazardous Condition Caused by Violation of this Chapter:** If the Zoning Administrator determines that a violation of this Chapter exists, and further determines that the nature of such violation is not such as to pose great and immediate danger to the public health, safety, peace, morals or decency, the Zoning Administrator shall serve written notice on the current owner of the property on which said violation is occurring to remove said violation within ten working days. If such violation is not removed within such ten working days, the Zoning Administrator may cause the violation to be abated. Costs associated with said abatement shall be charged to the owner of the property on which said violation has occurred.
- (c) **Cost of Abatement:** In addition to any other penalty imposed by this Subchapter for a violation of the provisions of this Chapter, the cost of abating a violation of this Chapter shall be collected as a debt from the owner of the property on which said violation has occurred. An account of the expenses incurred by the City to abate the violation shall be kept and such expenses shall be charged to and paid by the property owner. Notice of the bill for abatement of the violation shall be mailed to the last known address of said property owner and shall be payable within 30 calendar days from the receipt thereof. Within 60 days after such costs and expenses are incurred and remain unpaid, the City shall enter such charges onto the tax roll as a special tax as provided by State Statute.

SUBCHAPTER 17-9: DEFINITIONS

Section 17.901 Rules of Construction and Definitions

In the construction of this Ordinance, the following rules shall be observed and applied, except where the context clearly indicates otherwise:

- (1) Words used in the present tense shall include the future.
- (2) Words used in the singular number shall include the plural number, and the plural the singular.
- (3) The words “shall”, “must”, and “will”, are mandatory and not discretionary.
- (4) The word “may” is permissive.
- (5) All words not defined shall have their common meaning.
- (6) If there is any ambiguity between the text of this Ordinance and any caption or illustration, the text shall control.
- (7) All public officials, bodies, and agencies to which references are made are those of the City of Oconomowoc unless otherwise indicated.

Section 17.902 Interpretations

The Zoning Administrator has final authority to determine the interpretation or usage of terms used in this Zoning Ordinance. Any person may request an interpretation of any term by submitting a written request to the Zoning Administrator who shall respond in writing within 30 days.

Section 17.903 Definitions of General Use Categories and Specific Use Types

This Section defines the general use categories and specific use types listed within the *Table of Allowable Uses*.

(1) Residential Uses

- (a) Household Living:** This use category is characterized by residential occupancy of a dwelling unit by a household. Tenancy is arranged on a month-to-month or longer basis, with a minimum of 30-days. Common accessory uses include recreational activities, raising of pets, gardens, personal storage buildings, hobbies, and parking of the occupants’ vehicles. Specific use types include, but are not limited to:

1. **Dwelling, Duplex:** A structure containing two (2) dwelling units, each of which has access to the outside.
2. **Dwelling, Live/Work:** A structure or portion of a structure: (1) that combines a commercial or manufacturing activity that is allowed in the zone with a residential living space for the owner of the commercial or manufacturing business, or the owner’s employee, and that person’s household; (2) where the resident owner or employee of the business is responsible for the commercial or manufacturing activity performed.



Dwelling, Duplex

3. **Dwelling, Single-Family Detached:** A building consisting of a single dwelling unit only, separated from other dwelling units by open space.
4. **Dwelling, Multi-Family:** A building designed exclusively for occupancy by three (3) or more families living independently of each in other in individual dwelling units.

(b) Group Living: This category is characterized by residential occupancy of a structure by a group of people who do not meet the definition of “Household Living”. Tenancy is arranged on a monthly or longer basis, and the size of the group may be larger than a family. Generally, Group Living structures have a common eating area for residents. The residents may receive care, training, or treatment, and caregivers may or may not also reside at the site. Accessory uses commonly include recreational facilities and vehicle parking for occupants and staff. Specific use types include, but are not limited to:

1. **Community Living Arrangement:** Community living arrangement land uses include all facilities provided for in Wisconsin Statutes 46.03(22), including child welfare agencies, group homes, for children, foster homes, treatment foster homes, adult family homes, and community based residential facilities. Community living arrangements are regulated depending on their capacity by Wisconsin Statutes §62.23(7)(i).
2. **Elderly Housing, Assisted Living Facility:** A residential facility maintained for the purpose of providing skilled nursing care and medical supervision at a lower level than that available in a hospital.
3. **Nursing Home, Hospice, Life Care Center:** A facility that is maintained primarily for the care, treatment, and dispensing or administration of medication for people including the aged, ill, injured, or infirm, on a 24-hour basis, under the direction of licensed physician or nurse.

(2) Public, Institutional, and Civic Uses

(a) Community and Cultural Facilities: Uses including buildings, structures, or facilities owned, operated, or occupied by a government entity or nonprofit organization to provide a service to the public. Specific use types include, but are not limited to:

1. **Government Administration and Civic Buildings:** An office of a governmental agency that provides administrative and/or direct services to the public, such as, but not limited to: post offices, employment offices, libraries, museums, public assistance offices, or motor vehicle licensing and registration services.
2. **Social, Fraternal Lodges:** Buildings and facilities owned or operated by a corporation, association, person, or persons for social, educational, or recreational purpose, to which membership is required for participation, and not primarily operated for profit nor to render a service that is customarily carried on as a business.

3. **Public Safety Facility:** The conduct of publicly owned safety and emergency stations, such as, but not limited to, fire stations, police stations, and emergency medical and ambulance services.
 4. **Cemetery:** Land used for the burial of the dead and dedicated for cemetery purposes.
 5. **Places of Worship:** A facility where people regularly assemble for religious worship and any incidental religious education, childcare or meeting rooms which are maintained and controlled by a religious body.
- (b) Child Care Facilities:** Facilities that provide care for children on a regular basis away from their primary residence. Accessory uses include offices, recreation areas, and parking. This category does not include public or private schools or facilities operated in connection with an employment use, shopping center, or other principal use, where children are cared for while parents or guardians are occupied on the premises.
1. **Child care/Daycare center, nursery school:** A facility licensed by the State Department of Health and Family Services, or any other government agency that assumes its authority and responsibility, in which qualified persons, other than a relative or guardian provide care and supervision for children, adolescents, or adults for less than twenty-four (24) hours per day. Daycare centers include nursery schools that are similarly licensed.
 2. **Daycare Home, Family:** An occupied residence in which a qualified person or persons residing in the dwelling provides care for eight (8) or less children or adults. The care of eight (8) or less people is not subject to the regulations of this Ordinance.
- (c) Health Care Facility:** Health Care uses are characterized by activities focusing on medical services, particularly licensed public or private institutions that provide primary health services and medical or surgical care to persons suffering from illness, disease, injury, or other physical or mental conditions. Accessory uses may include laboratories, outpatient or training facilities, and parking, or other amenities primarily for the use of employees in the firm or building. Specific use types include, but are not limited to:
1. **Hospital:** A building or portion thereof for the accommodation of sick, injured, or infirm persons. Services regularly include the keeping of patients overnight. Incidental accessory uses include cafeterias and gift shops.
 2. **Immediate Care Facility:** A non-residential facility, whether public or private, principally engaged in providing an emergency basis out-patient services for health diagnosis, treatment of human disease, pain, injury, or physical condition, by licensed physicians and nurses, and providing access for emergency vehicles. These facilities may also provide for the dispensing of pharmaceutical or medical supplies.
 3. **Medical or Dental Office or Clinic:** An establishment primarily engaged in furnishing, on an outpatient basis, chiropractic, dental, medical, surgical, medical imaging, or other services to individuals, including the offices of chiropractors, physicians, dentists, pharmacists, and other health

practitioners, medical and dental laboratories, outpatient care, and outpatient care facilities. Patients are not kept overnight except under emergency conditions.

4. **Physical, Occupational or Massage Therapy:** An establishment where licensed professional therapists provide services to clients on an outpatient basis.

(d) Park and Open Space: Park and open space uses focus on natural areas, large areas consisting mostly of vegetative landscaping or outdoor recreation, community gardens, or public spaces. Lands tend to have few structures. Accessory uses may include clubhouses, playgrounds, maintenance facilities, concessions, caretaker's quarters, and parking. Specific use types include, but are not limited to:

1. **Athletic Fields and Courts:** Land, often requiring equipment, designed for outdoor games and sports such as baseball, football, tennis, and soccer.
2. **Community Garden:** A public facility for cultivation of fruits, flowers, vegetables, or ornamental plants by more than one person or family.
3. **Open Space:** An area that is not developable due to environmental constraints or on which development has been limited for aesthetic, environmental, or recreational purposes, not including golf courses.
4. **Park:** Areas open to the general public and reserved for recreational, educational, or scenic purposes.

(e) Educational Facilities: Public, private, and parochial institutions at the primary, elementary, middle, high school, or post-secondary level, or trade or business schools, that provide educational instruction to students. Accessory uses include play areas, cafeterias, recreational and sport facilities, auditoriums, and before-or after-school daycare. Specific use types include, but are not limited to:

1. **College or University:** A degree-granting institution that provides education beyond the high school level. The use includes, but is not limited to, classroom buildings, offices, laboratories, lectures halls, athletic facilities, and dormitories.
2. **Elementary or Secondary School:** An educational institution that satisfies the applicable education laws of the State of Wisconsin for students in elementary or secondary grades.

(3) Agricultural Uses

(a) Cultivation: The use of land primarily for growing or producing field crops, including field crops for consumption by animals located off-site or for tree farming or nursery operations.

(4) Commercial Uses

(a) Animal Related Services: Animal related services involve the boarding and care of animals on a commercial basis. Accessory uses may include

confinement facilities for animals, parking, and storage areas. Specific use types include, but are not limited to:

1. **Kennel:** Any facility where animals owned by another person are temporarily boarded for compensation including animal daycare; provided, however, that this definition shall not apply to veterinary hospitals.
2. **Veterinary Clinic/Hospital:** A facility where animals or pets are given medical or surgical treatment and are cared for during the time of such treatment. Use as a kennel shall be limited to short-term boarding and shall be only incidental to the clinic/hospital use.
3. **Animal Grooming:** An establishment where domestic animals are bathed, clipped, or combed.

(b) Financial Services: Establishments that provide retail banking services, mortgage lending, and similar financial services to individuals and businesses. This classification includes those institutions engaged in the on-site circulation of cash money and check-cashing facilities, but does not include bail bond brokers. Accessory uses may also include automatic teller machines, offices, and parking. The use may or may not be allowed to have a drive-through facility, depending on the zoning district.

1. **Payday Loan Business:** Any person licensed, pursuant to Wisconsin Statutes, who accepts a check, holds the check for a period of time before negotiating or presenting the check for payment, and pays to the issuer an agreed-upon amount of cash, or who refinances or consolidates such a transaction.

(c) Food and Beverage Services: Food and beverage services businesses serve prepared food or beverages for consumption on or off the premises. Accessory uses may include food preparation areas, offices, and parking. Specific use types include, but are not limited to:

1. **Bar or Nightclub:** A building or part of a building used primarily for the sale or dispensing of alcoholic beverages or liquor by the drink. Dancing and musical entertainment are permitted, subject to all applicable City regulations.
2. **Restaurant, with Drive-Through:** An eating/drinking establishment in which the principal business is the preparation and sale of foods or beverages to the customer in a ready-to-consume state and in which the design or method of operation of all or any portion of the business allows food or beverages to be served directly to the customer in a motor vehicle without the need for customer to exit the motor vehicle.
3. **Restaurant, without Drive-Through:** An area or structure in which the principal business is the preparation and sale of foods and beverages to the customer in a ready-to-consume state. Operations may or may not include outdoor seating areas or outdoor food service, but the operation does not include a drive-through facility.

- (d) **Lodging Facilities:** For profit facilities where lodging, meals, and the like are provided to transient visitors and guests for a defined period. Specific use types include, but are not limited to:
1. **Bed and Breakfast:** An establishment that exclusively provides indoor lodging facilities which provide meals only to paying lodging customers, and which is the principal residence of the operator.
 2. **Hotel, Motel, or Lodge:** A building or group of buildings containing nine (9) or more sleeping rooms that are occupied or intended or designed to be occupied as temporary accommodations for persons who are lodged with or without meals, for compensation.
- (e) **Office, Business and Professional:** Business and professional office provide executive, management, administrative, or professional services, but not involving the sale of merchandise except as incidental to a permitted use. Typical examples include real estate, insurance, property management, investment, employment, travel, advertising, law, architecture, design, engineering, accounting, call centers, and similar offices. Accessory uses may include cafeterias, health facilities, parking, or other amenities primarily for the use of employees in the firm or building.
- (f) **Personal Services:** Establishments that provide individual services related to personal needs directly to customers at the site of the business, or that receive goods from or return goods to the customer, which have been treated or processed at that location or another location. Specific use types include, but are not limited to:
1. **Dry Cleaning and Laundry Service:** An establishment where laundry or dry cleaning is dropped off and picked up by customers, and that also includes on-site laundry and/or cleaning activities.
 2. **General Personal Services:** An establishment, whether for consideration or not, that provides care, advice, aid, maintenance, repair, treatment, or assistance, not including the practice of a profession and the wholesale or retail sale of goods. Examples include, but are not limited to, shoe repair, beauty and barber shops, massage therapy, tattoo parlors, and tanning salons.
- (g) **Recreation and Entertainment, Indoor:** Indoor Recreation and Entertainment uses provide recreation or entertainment activities within an enclosed environment. Accessory uses may include concessions, snack bars, parking, and maintenance facilities. Specific use types include, but are not limited to:
1. **Sexually Orientated Business:** An adult arcade, adult bookstore, adult novelty store, adult video store, adult cabaret, adult motion picture theater or adult theater (see Section 12.17 of the Municipal Code for regulations and licensing).
 2. **Art Gallery:** Any permanent facility for the collection and display of objects of art.
 3. **Movie Theater:** An indoor theater for the showing of motion pictures.

- (h) **Recreation and Entertainment, Outdoor:** Outdoor recreation and entertainment uses provide recreation or entertainment activities outside of an enclosed environment. Accessory uses may include concessions, snack bars, parking, and maintenance facilities. Specific use types include, but are not limited to:
1. **General Outdoor Recreation, Commercial:** Intensely developed recreational uses such as amusement parks, miniature golf courses, commercial tennis courts, batting cages, skateboard or skate parks or courses, bicycle motocross courses, water parks or slides, drive-in movie theaters, and archery facilities.
 2. **Golf Course or Driving Range:** A tract of land laid out with a course having nine or more holes for the playing of golf, including any accessory clubhouse, driving range, offices, restaurant, concession stand, picnic tables, pro shop, maintenance facilities, or similar accessory uses or structures.
- (i) **Retail Sales:** Retail sales firms are involved in the sale, lease, or rent of new or used products to the general public. Any outdoor display or sales area is subject to the regulations of this Ordinance. Accessory uses may include offices, parking, storage of goods, and assembly, repackaging, or repair of goods for on site sale. Specific uses types include, but are not limited to:
1. **Greenhouse or Nursery, Commercial:** Land or greenhouses used to raise flowers, shrubs, and plants for sale.
 2. **Grocery Store:** A retail establishment primarily selling prepackaged and perishable food as well as other convenience and household goods.
 3. **Liquor Store:** A retail establishment licensed to sell alcoholic beverages such as beer, wine, and liquor.
 4. **Retail, General:** A commercial enterprise that provides goods directly to the consumer, where such goods are available for immediate purchase and removal from the premises by the consumer. Examples include, but are not limited to apparel shops, appliance sales, auto parts store, bait shops, bakeries, bookstores, convenience stores without gas pumps, department stores, factory outlet stores, florists, and souvenir shops.
- (j) **Vehicles and Equipment:** Vehicles and equipment uses include a broad range of uses for the maintenance, sale, or rental of motor vehicles and related equipment. Accessory uses may include incidental repair and storage and offices. Specific use types include, but are not limited to:
1. **Parking Lot:** An open, hard-surfaced area, other than a street or public way, to be used for the temporary storage of operable vehicles, and available to the public whether for compensation or for free. This use type does not include off-street parking that is provided as accessory to principal use. For purposes of this Ordinance, parking structures shall also be considered parking lots. Parking structures are structures designed to accommodate vehicular parking spaces that are fully or partially enclosed

or located on the deck surface of a building. This definition includes parking garages and deck parking.

2. **Gasoline Sales:** Any area used for retail sales of gasoline or other fuels, or automobile accessories and incidental services.
3. **Vehicle Sales and Rental:** An establishment engaged in the display, sale, leasing, or rental of new or used motor vehicles. Vehicles included, but are not limited to, automobiles, light trucks, vans, trailers, recreational vehicles, motorcycles, personal watercraft, utility trailers, all-terrain vehicles, and mobile homes.
4. **Vehicle Service and Repair:** An establishment engaged in the repair and maintenance of motor vehicles.

(5) Industrial Uses

- (a) **Industrial Service:** Industrial service firms are engaged in the repair or servicing of agricultural, industrial, business, or consumer machinery, equipment, products, or by products. Contractors and similar uses perform services off-site. Few customers come to the site. Accessory activities may include sales, offices, showrooms, parking, and storage. Specific use types include, but are not limited to:
 1. **Building Materials Sales:** An establishment for the sale of materials, hardware, and lumber customarily used in the construction of buildings and other structures, including facilities for storage. Operations may be indoor and/or outdoor.
 2. **General Industrial Service:** All other industrial service establishments not listed within one of the other enumerated use types. Example include: construction materials storage; welding shop, machine shop; electric motor repair; repair, storage, salvage, or wrecking of heavy machinery; and heavy truck servicing and repair.
 3. **Natural Resource Processing:** The development or extraction or processing of rock, material, or similar product.
- (b) **Manufacturing and Production:** This use category includes firms involved in the manufacturing, processing, fabrication, packaging, or assembly of goods. Natural, constructed, raw, secondary, or partially completed materials may be used. Products may be finished or semi-finished and are generally made for the wholesale market, for transfer to other plants, or to order for firms or consumers. Custom industry is included (e.g. establishments primarily engaged in the on-site production of goods by hand manufacturing involving the use of hand tools and small-scale equipment). Goods are generally not displayed or sold on site, but if so, such activity is a subordinate part of sales. Relatively few customers come to the manufacturing site. Accessory activities may include retail sales, offices, cafeterias, parking, employee recreational facilities, warehouse, storage yards, repair facilities, truck fleets, and caretaker's quarters. Specific use types include, but are not limited to:

1. **Assembly, Light:** An establishment engaged only in the assembly of goods. No manufacturing of parts occurs. Goods are shipped to the establishment, assembled, packaged, and reshipped.
 2. **Manufacturing, Heavy:** An establishment engaged in the manufacture or compounding process of raw materials. Such activities may include the storage of large volumes of highly flammable, toxic matter or explosive materials needed for the manufacturing process.
 3. **Manufacturing, Light:** An establishment engaged in the manufacture, predominately from previously prepared materials, of finished products or parts, including processing, fabrication, assembly, treatment, and packaging of such products, and incidental storage, sales, and distribution of such products, but excluding basic industrial processing. Examples include, but are not limited to: airplane, automobile, or truck assembly, remodeling, or repair; bottling works; boat building, machine or blacksmith shops; metalworking or welding shops; paint shops; and printing and publishing shops.
- (c) **Warehouse and Freight Movement:** Firms involved in warehouse, freight movement, or distribution are engaged in the storage movement of goods for themselves or other firms. Goods are generally delivered to other firms or the final consumer, except for some will call pickups. There is little on site sales activity with the customer present. Accessory uses may include offices, truck fleet parking, and maintenance areas. Specific use types include, but are not limited to:
1. **Mini-Storage:** A building or group of buildings in a controlled access and fenced compound that contains varying sizes of individual, compartmentalized, and controlled access stalls or lockers for the storage of customers' goods or ware.
 2. **Storage Yard:** Any lot or portion of a lot that is used for the sole purposes of the outdoor storage of fully operable motor vehicles, construction equipment, construction materials, or other tangible materials and equipment.
 3. **Warehouse/Distribution Center:** A structure containing an area available for the primary purpose of storing raw materials, goods, or property.
 4. **Wholesale Establishment:** An establishment primarily engaged in the sale or distribution of goods and materials in large quantity to retailers or other businesses for resale to individual or business customers. This shall include heavy manufacturing, resource extraction, bulk storage of hazardous materials, or scrap or salvage operations.
- (d) **Telecommunications:** Telecommunications facilities transmit analog or digital voice or communications information between or among points using electromagnetic signals via antennas, microwave dishes, and similar structures. Supporting equipment includes buildings, shelters, cabinets, towers, electrical equipment, parking areas, and other accessory development.

- (e) **Waste and Salvage:** Waste and salvage firms receive solid or liquid wastes from others for disposal on the site or for transfer to another location. The category includes uses that collect sanitary wastes, or uses that manufacture or produce goods or energy from the composting of organic materials or processing of scrap or waste materials. Waste and salvage uses also include uses that receive hazardous wastes from others. Accessory uses may include recycling of materials, offices, and repackaging and shipment of by-products.

(6) **Accessory Uses and Structures**

- (a) **Accessory Building:** A building detached from a principal building located on the same lot and customarily incidental and subordinate to the principal building or use.
- (b) **Accessory Use:** A use of land or a building or portion thereof customarily incidental and subordinate to the principal use of the land or building and located on the same lot with the principal use.
- (c) **Donation Drop-Off Boxes:** Any container, storage unit or temporary structure that can be or is used for the holding of donations with collection of these donations made at a later date or time and which is located for such purposes outside an enclosed building.
- (d) **Home Occupation:** A commercial activity conducted in a residential zoning district that complies with this Ordinance.
- (e) **Play Structure:** A detached structure which can be or is intended to be used by minors to engage in commonly accepted play activities. Examples include tree houses, rock climbing walls, jungle-gyms, and similar uses.
- (f) **Play House:** A play structure or component thereof, which is covered or partially covered and which has at least three (3) walls or sides, and is placed on or attached to the ground and not entirely located on and supported by a tree, such as a tree house.
- (g) **Portable Storage Structure:** A contained, storage unit, shed-like container or other portable structure, other than an accessory building or shed and land use requirements, that can or is used for the storage of personal property of any kind and which is located for such purposes outside an enclosed building.
- (h) **Seasonal Play Structure:** A play structure that is not permanently attached to the ground, is ordinarily not intended for year-round usage because of its design or limited usefulness and is removed during the off season of use.
- (i) **Seasonal Swimming Pool:** A seasonal swimming pool is a receptacle for water containing less than 1,000 gallons that are constructed so they are readily disassembled for storage and reassembled to its original integrity. Seasonal pools are yearly assembled and used from May 1st to September 1st.
- (j) **Swimming Pool:** A swimming pool is a receptacle for water, whether above or below ground, intended for use by the owner, his/her friends and guests for bathing or swimming.

(k) Vending Machine: A stand-alone, self contained or connected appliance machine located inside or outside a principal building, or structure that dispenses a product.

Section 17.904 Other Terms Defined

Accent Paving: Hard-surface material that is different from the surrounding pavement due to the use of paint, other hard-surface material, color, stamping, etc.

Access: A means of vehicular approach, i.e., entry to or exit from a property, street or highway.

Alter, or Alteration: Any act or process that changes one or more of the interior or exterior architectural or structural features of a building, including but not limited to the erection, construction, reconstruction, or removal of any building.

Appeal: A request for a review of a decision made pursuant to this Zoning Ordinance.

Arcade: An arched or covered passageway, or series of arches supported on piers or columns.

Appurtenance: Anything attached to a building including an apparatus.

Awning: A device attached to a building when the same is so erected as to either permit its being raised or retracted to a position against the building when not in use, or to provide shade.

Building: A structure designed to be used as a place of occupancy, storage, or shelter.

Building, Principal: The primary building on a parcel intended for principal use.

Building Frontage: The portion of a building that faces and is most parallel to a public or private street.

Building Inspector: As used in any adopted technical code of the City, the City Building Inspector.

Canopy: A structure, other than an awning, attached to a building and usually carried by a frame supported by the ground or sidewalk.

Conditional Use Permit: A permit that authorizes the recipient to make use of property in accordance with the requirements of this Zoning Ordinance.

Condominiums: A building, or group of buildings, in which units are owned individually, and the structure, common areas, and facilities are owned by all owners on a proportional, undivided basis. It is a legal form of ownership of real estate and not a specific building type or style.

Context: The relationship of the building to its surroundings in terms of size, form, character and site development.

Commercial Power Equipment: Includes equipment of 20 horse power or less intended for occasional use on residential property including but not limited to power

generators, power hand tools, chainsaws, jackhammers, or other pavement breakers, or other similar machinery.

Continuous Noise: Any noise whose level varies less than 3dB(A) during the course of a period of at least five (5) minutes.

Construction: The erection, excavation, demolition, alteration, or repair of any building or structure and/or the excavation, alteration or repair of any streets or highways.

Construction Equipment: Includes industrial machinery of greater than 20 horse power such as tractors, bulldozers, drills, augers, loaders, power shovels, cranes, derricks, paving machines, trenchers, compactors, pavement breakers, compressors, and all other similar machinery.

Decibel or DB: A logarithmic unit of sound intensity.

Decibel on the A-weighted Network or dBA: Decibels measured on the A-weighted network of a calibrated sound level meter utilizing the A-level weighted scale and the faster meter response.

Demolish, or Demolition: To tear down, wreck, raze, or ruin a structure.

Density, Gross: The ratio of dwelling units per acre utilizing the full acreage of the parcel without subtracting areas dedicated to public or private roads, schools, parks, stormwater ponds, or similar public use and open space areas.

Density, Net: The same measurement as in gross density, except that the land area considered excludes lands dedicated to the public, rights-of-way, wetlands, floodplains, and dedicated open space, whether such open space is held in public or private ownership.

Design Guideline: A standard of appropriate architectural features and site activity to include parking, landscaping, pedestrian provisions, etc., that will preserve the historic and architectural character of a landmark, building, area, or object.

Developer: Any person(s) completing allowed and permitted improvements on a lot, parcel, or tract of land. A developer may be the owner or a person authorized by the owner.

Development Activity: An improvement that is allowed and permitted and completed on a lot, parcel, or tract of land by a developer or property owner. The term "development activity" shall include annexation, zoning, subdivision, planned unit development, building permit issuance, construction, alterations, land grading, excavating, and clearing.

Development Approval: Any final approval of a development activity.

Double-Frontage Lot: A lot with two (2) or more sides that abut a street.

Driveway: That portion of the vehicle accommodation area that consists of a travel lane bounded on either side by an area that is not part of the vehicle accommodation area.

Dwelling Unit: Any building, structure or portion thereof which is occupied as, or designed or intended for occupancy as, a residence by one (1) 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.

Easement: An interest in land owned by another that entitles the easement holder to a specific use of the described land.

Emergency Repairs: Repairs immediately necessary to protect the health and safety of the property owner, user, or general public.

Exterior Architectural Features: The features that contribute to the architectural character and general composition of the exterior of a building or structure, including but not limited to the kind, color, and texture of the building materials and the type, design, and character of all windows, doors, light fixtures, signs, and appurtenant features.

Façade: The front of a building including entries, parapets and rooflines, specifically the principal face.

Family:

- (a) A family is an individual, or two (2) or more persons related by blood, marriage, domestic partnership, or legal adoption, living together as a single housekeeping unit in a dwelling unit, including foster children, and up to one (1) roomer, with the following exceptions:
 - 1. In any residential district, a family may consist of two (2) unrelated adults and the minor children of each. Such a family may not include any roomers except where the dwelling unit is owner-occupied. For the purpose of this section, "children" means natural children, grandchildren, legally adopted children, stepchildren, foster children, or a ward as determined in a legal guardianship proceeding.
 - 2. In any district, a family also may consist of up to four (4) unrelated persons who have disabilities/are disabled or handicapped under the Fair Housing Amendment Act (FHAA) or the Americans with Disabilities Act (ADA), are living as a single household because of their disability and require assistance from a caregiver.
 - 3. In any district, up to two (2) personal attendants who provide services for family members or roomers who are disabled or handicapped under the FHAA or ADA and need assistance with the activities of the daily living shall be considered part of a family. Such services may include personal care, house-keeping, meal preparation, laundry or companionship.
- (b) For the purpose of this definition, an owner-occupied dwelling unit shall mean any dwelling unit where an individual or two (2) or more persons who reside in such unit constitute one hundred percent (100%) of the owners of either the entire fee simple interest or the entire land contract vendee's interest in said dwelling unit. Provided, however, dwelling units occupied by owner-occupants holding less than one hundred percent (100%) interest in the fee simple shall nonetheless be considered owner-occupied for the purposes of this definition where the remainder of said interest is held by an investor pursuant to a shared

equity purchase arrangement and the owner-occupant has continuously resided in said dwelling unit for at least four (4) years.

- (c) Absence of any owner from the dwelling unit for health reasons or by virtue of a marital separation or divorce or any temporary absences of any owner from the dwelling unit shall not constitute a reduction in the number of owners who reside in such unit for the purpose of determining whether such unit continues to be owner-occupied.

Five-Year Time of Travel (TOT): The area up-gradient of a pumping well from the outer boundary which it is determined or estimated that groundwater potential contaminants will take five (5) years to reach the pumping well.

Floor area, Gross: The total area of a building measured along the outside dimensions of the building, including each floor or level used for occupancy and storage.

Frontage: Any boundary line of a lot or parcel of land that coincides with the right-of-way of a street.

Height: The vertical distance from: (1) the average elevation of the adjoining ground level or (2) the established grade, whichever is lower to the top of the cornice of a flat roof, to the deck line of a mansard roof, to a point of the roof directly above the highest wall of a shed roof, to the uppermost point on a round or other arch type roof, to the mean distance between the gable peak and the roof sill of the highest gable on a gable, gambrel, or hip pitched or hip roof.

Impervious Surface: A surface that does not permit the absorption of fluids. Such surfaces are those from which fluids will bead up and run off or can be removed without their being absorbed into the surface material.

Improvements: Any changes, additions, or deletions made to property that did not naturally exist thereon.

Impulsive Noise: Sound of short duration, usually less than one (1) second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and discharge of firearms.

Intensity of Use: The type(s), amount, and level of use anticipated in the development of any parcel of land.

Intermittent Noise: Any noise which goes on and off during a course of measurement of at least five (5) minutes, but which exceeds ten (10) seconds in duration each time it is on.

Large Scale Development: A single user who occupies no less than 40,000 square feet of cumulative building floor area, typically requiring a high parking to building ratio. Such users may include membership wholesale clubs that emphasize bulk sales, discount stores, department stores, and large stores selling food, drug, household merchandise and clothing.

Loading Area: A portion of the vehicle accommodation area used for loading and unloading of goods, equipment, people, etc.

Lot: A tract of land, designated by metes and bounds, land survey, minor land division or plat, and recorded in the office of the County Register of Deeds.

Lot Area: The area contained within the property boundaries of a recorded lot.

Lot Corner: A lot situated at the junction of two (2) or more intersection streets, or a lot at the point of deflection in alignment of a continuous street, the interior angle of which does not exceed 135 degrees.

Lot Coverage: Any portion of a lot which, when viewed from above, is covered by impervious surface, including wet stormwater ponds, but not including green roofs and vegetated stormwater facilities.

Lot Frontage: Lot width measured at the street lot line. When a lot has more than one (1) street lot line, lot width shall be measured, and the minimum lot width required by this Chapter shall be provided at each such line.

Lot Line: A lot line is the property line bounding a lot except that where any portion of a lot extends into the public right-of-way or a proposed public street right-of-way, the line of such public right-of-way shall be the lot line.

Lot Line, Front: A lot line which abuts a public or private street right-of-way. In the case of a lot which has two (2) or more street frontages, the lot line along the shortest street frontage shall be the front lot line.

Lot Line, Rear: In the case of rectangular or most trapezoidal shaped lots, that lot line which is parallel to and most distant from the front lot line of the lot. In the case of irregular, triangular, or gore shaped lot, a line 20 feet in length, entirely within the lot, parallel to and at the maximum possible distance from the front line shall be considered the rear lot line. In the case of lots which have frontage on more than one (1) road or street, the rear lot line shall be opposite the lot line onto which the front entrance to the principal building faces.

Lot Line, Side: Any boundary of a lot which is not a front lot line, street side lot line, or a rear lot line.

Lot Line, Street Side: Any lot line which abuts a public or private street right-of-way which is not the front lot line.

Lot of Record: A platted lot or lot described in a certified survey map or metes and bounds description which has been approved by the City or Waukesha County; and has been recorded in the office of the County Register of Deeds.

Lot Width: The maximum horizontal distance between the side lot lines of a lot, measured parallel to the front lot lines and at the rear of the required front yard.

Mass/Scale: The appearance of the building in terms of size, height, bulk, and building mass, and its proportion to surrounding landforms, vegetation, and buildings.

Master Plan: A long-term outline of a project or plan outlining a comprehensive long-term strategy.

Modulation/Articulation: Variation of the building façade (e.g. stepping out or extending back the footprint/façade, variation in the roofline, addition of building elements such as balconies, decks, porches, window patterns/types, and variation in building materials/colors).

Nonconforming Building or Structure: Any building or structure which does not comply with all of the regulations of this ordinance or any amendment hereto governing bulk for the zoning district in which such building is located.

Nonconforming Lot: A lot that was in compliance with an earlier version of this Zoning Ordinance when created, but that does not meet current requirements of this Zoning Ordinance.

Nonconforming Use: A situation or use that complied with the Zoning Ordinance when created, but which does not currently conform to one or more of the regulations applicable to the district in which the lot or structure is currently located.

Ordinance Repairs and Maintenance: Work done on a building in order to correct or prevent any deterioration, decay of, or damage to such building or any part thereof, in order to restore or preserve the same as nearly as practicable to its condition prior to such deterioration, decay, or damage.

Orientation: The relationship of a structure to streetscape, parking lots, sidewalks, surrounding structures, and landforms.

Overlay Zone: An overlapping zone that identifies special physical and cultural characteristics and requires specific use and development constraints in order to maintain the uniqueness of the zone, and which constraints are in addition to the underlying zoning district restrictions.

Parapet: The top of a wall that forms the upper portions of a building façade.

Parcel: A lot or tract of land typically delineated as part of a recorded plat or survey.

Parking Areas: A parking lot that is intended for parking of vehicles.

Parking Area Aisles: A portion of the vehicle accommodation area consisting of lanes providing access to parking spaces.

Parking Space: A portion of the vehicle accommodation area set aside for the parking of one (1) vehicle.

Perpetual Noise: Any noise whose level varies less than 3dB(A) during a period of at least thirty (30) minutes.

Person: An individual, counselor, executor, trustee, administrator, personal representative, other fiduciary, corporation, firm, partnership, association, or organization.

Planned Development (PD): An area of land, controlled by one or more land owners to be developed under unified control or unified plan of development for a number of dwelling units, commercial, educational, recreational, or industrial uses, or any combination of the foregoing, and which does not typically correspond in lot size, bulk,

or type of use, density, lot coverage, open space, or other restrictions in the Zoning Ordinance, but instead establishes unique overlay zoning, uses and design elements.

Plat: A map of a subdivision or individual lot.

Premises: The physical location where an activity is routinely conducted, which may include the primary structure, parking facilities and private roadways.

Public Areas: Any area which is free and open to the general public at all times.

Public Facilities: Any facility, including, but not limited to roads, public infrastructure, or other facilities operated or funded by a government body or public entity.

Public Parking: A parking area that is owned and maintained by the City that is open to the public generally called a “public parking area”.

Public Use: Uses that, unless otherwise stated herein, are owned and operated by a local, State, or Federal unit of government.

Residential Power Equipment: Power equipment intended for frequent use in residential areas, including but not limited to lawn mowers, snow and/or leaf blowers, riding tractors, and other similar garden tools.

Right-of-Way (R.O.W.): An area of land designated for public use for access across property, or location of private or government owned utilities, including streets, roads, alleys, walkways, etc.

Roofline: The upper most edge of a roof or parapet.

Roomer: A roomer is a person living in a dwelling unit who is other than part of the family because of blood, marriage or legal adoption, and is other than a foster child.

Shoreland: Lands within the following distances from the ordinary high water mark of navigable waters: 1,000 feet from a lake, river, pond or flowage; and 300 feet from a stream.

Shoreland Setback: The horizontal distance between the closest point of a structure or building and the ordinary high water mark of a navigable waters.

Single housekeeping unit: One (1) or two (2) or more individuals living together sharing household responsibilities and activities which may include, sharing expenses, chores, eating evening meals together and participating in recreational activities and having close social, economic and psychological commitments to each other.

Special Exception: A minor adjustment to the requirements of the Zoning Ordinance only where specifically authorized by this Ordinance.

Street or Road: A public or private thoroughfare used for passage of vehicular traffic.

Street, Alley: A public or private way, at the rear or side of property, permanently reserved as an ancillary means of vehicular or pedestrian access to abutting property.

Street, Cul-de-Sac: A dead-end street that widens sufficiently at the end to permit a vehicle to make a U-turn.

Structure: Anything constructed, assembled, erected or built on a lot.

Structured Parking: An above-ground or below-ground parking garage.

Subdivision: A division of a lot, parcel, or tract of land by the owner thereof or the owner's agent for the purpose of sale or of building development.

Terrace: A level plane or surfaced patio, abutting a principal building, not covered by any permanent structure.

Terrace, Paved: A terrace with a surface of any material other than natural vegetation.

Traditional Neighborhood Development (TND): A development that exhibits several of the following characteristics: alleys, street laid out in a grid system, buildings oriented to the street, front porches on houses, pedestrian-orientation, mixed land uses, and village squares or greens. The City regulates TNDs through the Planned Development process.

Use, Principal: The dominant use of a property.

Variance: A grant of permission by the Zoning Board of Appeals that authorizes the recipient to develop or use property in a manner that, according to the strict letter of this Zoning Ordinance, is not otherwise legally permitted.

Vegetative Stormwater Facility: A stormwater management facility that relies on plantings as an integral component of their functionality. Plantings can provide wildlife habitat and enhance many facility functions, including infiltration, pollutant removal, water cooling, flow calming, and erosion prevention.

Yard Sale: Any lawn sale, garage sale, attic sale, rummage sale, moving sale or other similar sale involving the display and/or of new and/or used goods on a lot where the principal use is residential.

Zoning District: Any section or sections of the City for which the regulations governing the use of land and the use, density, bulk, height, and coverage of buildings and other structures are uniform, except for planned development districts.

Zoning Map: The map adopted as an Ordinance by the City that delineates the extent of each district or zone established in this Zoning Ordinance.

Appendix A – Landscaping Charts & Checklists

Detailed Classification of Plant Species

Detailed Classification of Plant Species: Climax Trees (75 landscaping points)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
* <i>Acer saccharum</i> ^{RF}	Sugar Maple	S	Round	Rich soil; salt-sensitive; oval when young; yellow, orange or scarlet fall color.
“Green Mountain”				Scorch-resistant; leathery leaves.
* <i>Carya ovata</i> ^{RF}	Shagbark Hickory			Native and very adaptable, salt-sensitive, fruit-nut, lawn tree.
Ginkgo bilboa	Ginkgo	S	Pyramidal	Very urban, dioecious, females produce smelly fruits, golden yellow fall color.
“Fastigiata”	Sentry Ginkgo		Columnar	Seedless.
<i>Juglans nigra</i> ^{RF}	Walnut Eastern Walnut Black Walnut	F		Best in public open spaces or lawns; not to be used as a street tree; poisonous to other plants within the drip zone; susceptible to caterpillars and leaf-spot disease.
* <i>Quercus alba</i> ^{RF}	White Oak	S	Round	Extremely sensitive to soil compaction; tolerant of urban conditions; dry soil; subject to iron chlorosis; red fall color; very difficult to transplant; excellent lawn or shade tree.
* <i>Quercus bicolor</i> ^{RF}	Swamp White Oak	S	Round	Very tolerant of urban conditions; moist to wet, intolerant of alkaline soil; tolerates poor drainage; difficult to transplant; yellow fall color.
* <i>Quercus macrocarpa</i> ^{RF}	Bur Oak Mossycup Oak	S	Round	Sensitive to soil compaction; tolerant of urban conditions; dry to wet soil; no fall color; very difficult to transplant.
* <i>Quercus palustris</i>	Pin Oak	M	Pyramidal	Sensitive to soil compaction; tolerant of urban conditions; moist, acid soil; pendulous lower branches; red fall color; iron chlorosis on alkaline soil; lawn tree; cultivar “Sovereign” best for streets.
* <i>Quercus rubra</i> ^{RF} (also known as <i>Quercus Borealis</i>)	Northern Red Oak Red Oak	M	Round	Sensitive to soil compaction; tolerant of urban conditions; pyramidal when young; red fall color; well-drained soil; fast-growing for oaks; excellent lawn, shade, and street tree.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Tall Deciduous Trees (30 landscaping points)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Acer nigrum</i>	Black Maple	M	Oval	Does well in poor, dry soils; red to bright gold fall color; excellent for lawn, shade,

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
				or street.
<i>Acer platanoides</i>	Norway Maple	M	Round	Shallow root system; not to be used along streets.
“Cleveland”		F	Oval-upright	Uniform, dense foliage
“Columnare”			Columnar	Indistinct central leader.
“Crimson King”				Keeps deep purple leaf color throughout summer; susceptible to sun scald, bark-splitting and transplant shock.
“Drummondii”	Harlequin Norway Maple	S	Round	Variegated, cream-edged leaves.
“Emerald Queen”		F	Oval	Vigorous; crisp foliage.
“Globosum”	Globe Norway Maple	S	Globe	Useful on a standard under utility wires; 20’ height.
“Greenlace”			Round	Deeply divided, fine-textured leaves.
“Royal Red”		S	Round	Best for purple summer foliage.
“Shwedleri”			Round	New foliage reddish; bronze by summer.
“Summershade”		F		Rapidly growing cultivar; deep green, large, leathery leaves.
* <i>Acer rubrum</i> ^{RF}	Red Maple Scarlet Maple Swamp Maple	F	Round	Moist, acid soil; tolerates poor drainage; smooth gray bark; yellow, orange, or red fall color; salt-sensitive.
“Armstrong”			Fastigate	No fall color; light gray bark.
“Autumn Flame”				Early scarlet fall color.
“Bowhall”			Oval	Orange fall color
“Red Sunset”				Late, scarlet fall color.
“Schlesingeri”				Red-orange fall color.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Tall Deciduous Trees (30 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
* <i>Acer saccharinum</i> ^{RF}	Silver Maple Soft Maple White Maple River Maple	F	Vase	Heart and fast-growing; most soil; tolerates poor drainage; fine-textured; weak-wooded (develops heart rots after fifty years, limbs may fall); yellowish or no fall color
“Blair”		Very Fast		Strong branch structure; storm-resistant.
“Pyramidale”	Upright Silver Maple		Pyramidal	Improved branch structure.

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
“Silver Queen”	Seedless Sugar Maple		Round	Seedless
“Wieri”	Cutleaf Sugar Maple			Shredded leaves; pendulous branches.
<i>Aesculus hippocastanum</i>	Horsechestnut	M	Round	Urban; coarse; showy, white May flowers; litter problem; no fall color; difficult to transplant; pest or disease problems may limit use.
<i>Alnus glutinosa</i>	European Alder Black Alder	F	Oval	Rich or wet soils; produces catkins; possible winterkill.
<i>Betula lutea</i> ^{RF}	Yellow Birch	M	Round	Drooping branches; moist well-drained soils; yellow-orange bark; rusty yellow fall color.
<i>Catalpa speciosa</i>	Northern Catalpa	F	Oval	Poor, dry soil; showy, white June flowers; coarse; litter problem; no fall color.
* <i>Celtis occidentalis</i> ^{RF}	Common Hackberry	M	Vase	Tolerates alkaline soils; “pebbled” bark; yellowish fall color; pest or disease problem may limit use.
* <i>Fagus grandifolia</i> ^{RF}	American Beech	S	Oval	Moist, rich soil; smooth, gray bark; yellow-bronze fall color; difficult to transplant; salt-sensitive; sensitive to soil compaction.
<i>Fagus sylvatica</i>	European Beech	S	Round	Moist, rich soil; less difficult to transplant than American Beech; several cultivars available; excellent lawn tree.

Detailed Classification of Plant Species: Tall Deciduous Trees (30 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
* <i>Gleditsia triacanthos inermis</i>	Thornless Honeylocust	F	Vase	Tolerates poor drainage; thornless, as are all of the following; pest or disease problem may limit use; salt-tolerant; yellow fall color.
“Imperial”			Round	Podless; low-growing; flat-topped; pest or disease problem may limit use.
“Shademaster”			Irregular	Podless; vase shape in age; pest or disease problem may limit use.
“Skyline”			Upright	Podless; tends to form central leader; good golden fall color; pest or disease problem may limit use.
“Sunburst”			Irregular	Podless; yellow new foliage; poor branch structure; pest or disease problem may limit use.
* <i>Gymnocladus dioica</i>	Kentucky Coffeetree	M	Upright	Moist, rich soil; coarse and rugged; dioecious; yellowish fall color.

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Juglans cinerea</i> ^{RF}	Butternut	S		Needs good soil and consistent moisture; fairly good shade tree; susceptible to butternut decline.
<i>Larix decidua</i>	European Larch	F	Pyramidal	Full sun; graceful, fine-textured; transplant in spring before buds open; yellow fall color.
“Pendula”				Interesting weeping branches.
<i>Larix kaempferi</i>	Japanese Larch	F	Wide-Pyramidal	Similar to European Larch, more picturesque.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Tall Deciduous Trees (30 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Larix laricina</i> ^{RF}	American Larch Tamarack	M	Narrow-Pyramidal	Hardy; drought tolerant; used in shelterbelts.
<i>Liriodendron tulipifera</i>	Tuliptree	F	Upright	Rich, moist soil; unique leaves and interesting June flowers; yellow fall color; purchase from northern source.
* <i>Platanus occidentalis</i>	Sycamore American Planetree	F	Pyramidal	Moist soil; tolerates poor drainage; mottled bark; coarse, maple-like leaves; no fall color; pest or disease problem may limit use.
<i>Populus alba</i> “Pyramidalis”	White Poplar	F	Fastigate	Moist soil; tolerates poor drainage; mottled bark; coarse, maple-like leaves; no fall color; pest or disease problem may limit use.
<i>Populus deltoides</i> ^{RF}	Eastern Poplar	Very fast	Fastigate	Hardy, fast growing; golden yellow fall color; tolerates drought; brittle; may produce "cotton"; too large for homes.
“Robusta”			Upright	Seedless.
“Siouxland”				Larger greener leaves; seedless; uniform in shape; hardy.
“Cottonless”				Seedless; many similar species available.
<i>Populus grandidentata</i> ^{RF}	Bigtooth Aspen	F	Narrow	Moist, sandy, gravelly soils; not shade tolerant; yellow fall color.
* <i>Prunus serotina</i> ^{RF}	Black Cherry	M	Oval	Dry soil; white flowers and black fruits in drooping racemes; orange fall color; pest or disease problem may limit use.
<i>Taxodium distichum</i>	Baldcypress	F	Pyramidal	Moist, intolerant of alkaline soil; tolerates poor drainage; sun; bronze fall color; fine texture; purchase from northern source.
* <i>Tilia americana</i> ^{RF}	American	M	Round	Sensitive to soil compaction; salt-sensitive;

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
	Linden Basswood Linden Tree Linn Tree			coarse; rich soils.
<i>Tilia cordata</i>	Littleleaf Linden	S	Pyramidal	Urban; moist soil; fragrant flowers; poor branch structure, needs training while young; yellow fall color.
“Chancellor”				Uniform, upright habit.
“Greenspire”				Improved branching habit.
<i>Tilia x euchlora</i> “Redmond”	Redmond Linden	M	Pyramidal	Urban; dark green foliage.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Medium Deciduous Trees (15 landscaping points)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Aesculus x carnea</i> "Briotii"	Ruby Horsechestnut	S	Round	Rich, moist soil; red flowers.
<i>Aesculus glabra</i>	Ohio Buckeye	S	Round	Rich, moist soil; yellow-green flowers; orange fall color.
<i>Alnus glutinosa</i>	European Alder	F	Oval	Wet; tolerates poor drainage; catkins; cone fruits; no fall color.
* <i>Betula nigra</i> ^{RF}	River Birch	M	Vase	Wet to dry, intolerant of alkaline soils; tolerates poor drainage; pinkish, peeling bark.
* <i>Betula papyifera</i> ^{RF}	Paper Birch	M	Oval	Cool, moist soil; white, peeling bark; golden yellow fall color; pest or disease problem.
<i>Betula pendula</i> "Gracilis"	Cutleaf European Birch	M	Weeping	Cool, moist soil; dissected leaves; yellow fall color; pests & disease.
<i>Betula platyphylla japonica</i>	Japanese White Birch	M	Pyramidal	White bark; some resistance to bronze birch borer.
<i>Cercidiphyllum japonicum</i>	Katsuratree	M	Columnar	Moist soil; dioecious; form controlled by pruning, wide spreading if multi-trunked; yellow to red fall color.
<i>Cladrastis lutea</i>	American Yellowwood	S	Round	Moist, rich soil; smooth, light gray bark; fragrant, white June flowers in large clusters; yellow fall color.
<i>Magnolia acuminata</i>	Cucumbertree	F	Pyramidal	Inconspicuous, greenish flowers; pink to red fruits; coarse foliage; no fall color.
* <i>Nyssa sylvatica</i>	Black Gum	S	Pyramidal	Moist soil; tolerates poor drainage; dense habit; dioecious; orange to scarlet fall color; difficult to transplant.
<i>Phellodendron amurense</i>	Amur Corktree	M	Round	Urban; dry soil; dioecious; compound leaves; corky bark; yellow fall color.
<i>Prunus maackii</i>	Amur Chokecherry	M	Round	Amber exfoliating bark; does well in containers.
<i>Prunus padus commutata</i>	Harbinger European Bird Cherry	S	Round	Sun; early to leaf out in spring; pest or disease problem.
* <i>Prunus pennsylvanica</i> ^{RF}	Pin Cherry	M	Upright	Poor, dry soil; sun; graceful; shortlived; suckering; red fruits; orange to red fall color.
<i>Prunus sargentii</i>	Sargent Cherry	M	Upright	Sun, well-drained soil; early, pink flowers; red fall color.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Medium Deciduous Trees (15 landscaping points)
(continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Salix alba tristis</i>	Golden Weeping Willow	F	Weeping	Wet soil; tolerates poor drainage; bright yellow twigs; fine-textured; litter problem.
<i>Ulmus parvifolia</i>	Chinese Elm	M	Vase	Disease resistant; exfoliating bark.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Low Deciduous Trees (10 landscaping points)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Acer ginnala</i>	Amur Maple	M	Round	Sun, shade; red fruit; red fall color.
* <i>Alnus rugosa</i>	Speckled Alder	F	Round	Wet soil; tolerates poor soil; lenticled bark.
* <i>Amelanchier arborea</i> ^{RF}	Downy Serviceberry	S	Upright	Dry soil; shade; gray bark; white flowers; yellow to red fall color; edible fruits.
<i>Amelanchier x grandiflora</i>	Apple Serviceberry	S	Spreading	Semi-shade; large, white flowers, edible fruits.
* <i>Amelanchier laevis</i>	Allegheny Serviceberry	S	Upright	Moist soil; shade; white flowers; orange to red fall color, edible fruits.
* <i>Carpinus caroliniana</i> ^{RF}	American Hornbeam	S	Spreading	Moist soil; shade; smooth, gray muscle-like trunks; orange fall color.
<i>Cercis canadensis</i>	Eastern Redbud	M	Spreading	Sun or shade; purplish-pink flowers; yellow fall color; purchase form northern source.
* <i>Cornus alternifolia</i>	Pagoda Dogwood	M	Spreading	Cool, moist soil; shade; blue-black berries on red stalks; early, maroon fall color.
* <i>Crataegus crus-galli</i> "Inermis"	Thornless Cockspear Hawthorn		Spreading	Urban; sun; persistent, brick red fruits; orange to red fall color; no thorns.
<i>Crataegus laevigata</i> "Paulii"	Paul's Scarlet Hawthorn	S	Upright	Heavy soil; sun; double, scarlet flowers in late May; no fall color; pest or disease problem.
"Superba"	Crimson Cloud Hawthorn			Single, scarlet flowers; resistant to leaf spot.
<i>Crataegus x lavallei</i>	Lavalle Hawthorn	S	Upright	Urban; sun; glossy foliage; bronzy-red fall color.
* <i>Crataegus mollis</i>	Downy Hawthorn	S	Upright	Sun; large, red, early-ripening fruit; yellow fall color; pest or disease problem.
<i>Crataegus phaenopyrum</i>	Washington Hawthorn	M	Upright	Urban; sun; latest blooming; small, persistent, orange-red fruits in clusters; orange fall color.
* <i>Crataegus punctata</i>	Dotted Hawthorn	S	Spreading	Moist, heavy soil; sun; picturesque; pest or

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
				disease problem may limit use.
<i>Crataegus x "Toba"</i>	Toba Hawthorn	S		Sun; double, pink, fragrant flowers; glossy leaves; red fruits; dwarf-15.
<i>Elaeagnus angustifolia</i>	Russianolive	F	Round	Dry, alkaline soil; sun; fragrant, inconspicuous flowers; silver-gray foliage; no fall color; pest or disease problem may limit use.
<i>Magnolia x loebneri</i> "Merrill"	Dr. Merrill Magnolia	M	Pyramidal	Rich soil; sun; white, many-petaled flowers; difficult to transplant.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Low Deciduous Trees (10 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Magnolia x soulangiana</i>	Saucer Magnolia	S	Round	Rich soil; sun; large pink flowers; difficult to transplant.
<i>Malus</i> species & cultivars	Flowering Crabapples			All require sun and well drained soil. They all possess a high degree of resistance to the apple scab disease.
<i>Malus</i> "Adams"	Adams Flowering Crabtree	M	Spreading	Slightly susceptible to fire blight; rose-red flowers; 5/8" diam., persistent, deep red fruits.
<i>Malus baccata jackii</i>	Jack Flowering Crabtree	M	Upright spreading	Slightly susceptible to fire blight; white flowers; tiny 1/3-1/2" diam., dark red fruits.
<i>Malus</i> "Bob White"	Bob White Flowering Crabtree	M	Rounded	Moderately susceptible to fire blight; white flowers; 5/8" diam., persistent, yellow fruits.
<i>Malus</i> "Candied Apple"	Weeping Candied Apple Flowering Crabtree		Weeping	Slightly susceptible to scab; pink flowers; 5/8" diam., persistent cherry-red fruits; foliage tinged with red.
<i>Malus</i> "Centurian"	Centurian Flowering Crabtree		Narrow-Upright	Disease resistant; rose-red flowers; 5/8" diam., persistent, cherry-red fruits.
<i>Malus</i> "David"	David Flowering Crabapple	M	Rounded	Slightly susceptible to fire blight and scab; white flowers; 1/4-1 1/2" diam., reddish fruits for in alternate years.
<i>Malus</i> "Dolgo"	Dolgo Flowering Crabtree	M	Upright-Spreading	Slightly susceptible to fire blight and scab; white flowers; 1 1/4-1 1/2" diam., persistent red fruits.
<i>Malus</i> "Donald Wyman"	Donald Wyman Flowering Crabtree	M	Rounded	Disease-resistant; white flowers; 3/8" diam.; persistent red fruits.
<i>Malus</i> "Dorothea"	Dorothea Flowering	S	Horizontal	Moderately susceptible to scab; clear pink semi-double flowers; 1/2" diam., yellow

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
	Crabtree			fruits.
<i>Malus</i> "Gibb's Golden Gage"	Gibb's Golden Gage Flowering Crabtree		Rounded	Disease resistant; white flowers; 1" diam., persistent, yellow fruits.
<i>Malus</i> "Indian Summer"	Indian Summer Flowering Crabtree		Rounded	Disease resistant; rose-red flowers; 5/8-3/4" diam., red fruits.
<i>Malus</i> "Mary Potter"	Mary Potter Flowering Crabtree	S	Horizontal	Moderately susceptible to fire blight and scab; white flowers; 1/2" diam., red fruits; 10' height.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Low Deciduous Trees (10 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Malus</i> "Ormiston Roy"	Ormiston Roy Flowering Crabtree	M	Rounded	Slightly susceptible to fire blight; white flowers, 3/8" diam., persistent, yellow fruits.
<i>Malus</i> "Profusion"	Profusion Flowering Crabtree	M	Rounded-Spreading	Slightly susceptible to fire blight; rose-red flowers; 1/2" diam., deep red fruits; bronze-green foliage.
<i>Malus</i> "Red Jewel"	Red Jewel Flowering Crabtree		Horizontal	Moderately susceptible to scab; white flowers; 1/2" diam., persistent, bright red fruits.
<i>Malus</i> "Robinson"	Robinson Flowering Crabtree		Upright-Spreading	Disease resistant; rose-red flowers; 3/8" diam, persistent, bright red fruits, bronze-green foliage.
<i>Malus</i> "Sentinel"	Sentinel Flowering Crabtree		Narrow-upright	Slightly susceptible to fire blight and scab; pale pink flowers; 1/2" diam., persistent, bright red fruits.
<i>Malus</i> "White Cascade"	White Cascade Flowering Crabtree	S	Weeping	Disease resistant; white flowers, 1/2" diam., yellowish fruits.
* <i>Ostrya virginiana</i> ^{RF}	Hophornbeam	S	Pyramidal	Dry soil; shade; catkins; elm-like leaves; yellow fall color.
* <i>Prunus americana</i> ^{RF}	American Plum	F	Horizontal	Dry soil; sun; suckering habit; white flowers; yellow to orange fall color.
<i>Prunus cerasifera</i> "Newportii"	Newport Plum	M	Round	Sun; reddish-purple summer foliage.
* <i>Prunus virginiana</i> ^{RF}	Chokecherry	M	Upright	Dry, infertile soil; suckering habit; white flowers; yellow to orange fall color.
"Canada Red" or "Shubert"	Shubert Chokecherry			Sun; foliage changes from green to purple in early summer.

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Pyrus calleryana</i> and cultivars	Callery Pear	M	Oval	Sun; early, white flowers; late red fall color.
<i>Salix matsudana</i> "Tortuosa"	Corkscrew or Contorted Willow	F	Upright	Wet soil; tolerates poor drainage; sun; twisted branches; pest or disease problem may limit use.
<i>Salix pentandra</i>	Laurel Willow	M	Round	Wet soil; sun; foliage glossy, dark green; dense habit.
<i>Sorbus alnifolia</i>	Korean Mountainash	S	Oval	Cool soil; simple leaves; small flowers and fruits; orange to red fall color; pest or disease problem.
<i>Sorbus aucuparia</i> and cultivars	European Mountainash	M	Oval	Cool soil; orange fruits; pest or disease problem
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Low Deciduous Trees (10 landscaping points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
* <i>Sorbus decora</i>	Showy Mountainash	S	Upright	Cool Soil; large, reddish fruits; pest or disease problem.
<i>Syringa reticulata</i>	Japanese Tree Lilac	S	Horizontal	Sun; large, pyramidal, cream-white flower clusters in June; tan fruits.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Tall Evergreen Trees (40 landscaping points)

Botanical Name	Common Name	Growth Rate	Height	Adaptation and Remarks
<i>Abies concolor</i>	White Fir	M	70'	Dry soil; heat; gray-green foliage.
<i>Picea abies</i>	Norway Spruce	F	75'	Deep soil; dark green foliage; long cones; pendulous branchlets
* <i>Picea glauca</i> ^{RF}	White Spruce	M	50'	Moist soil; sun; light green needles.
<i>Picea omorika</i>	Serbian Spruce	S	50'	Sun; narrow habit; pendulous branchlets.
<i>Picea pungens</i> glauca	Blue Colorado Spruce	S	60'	Sun; urban; blue needles; stiff, formal habit.
<i>Pinus cembra</i>	Swiss Stone Pine	S	50'	Sun; narrow habit.
<i>Pinus nigra</i>	Austrian pine	M	50'	Sun; urban; stout, dark green needles, pest or disease problem.
* <i>Pinus resinosa</i> ^{RF}	Red Pine	F	50'	Dry soil; sun; reddish bark; yellow-green winter color.
* <i>Pinus strobus</i> ^{RF}	Eastern White Pine	M	75'	Moist soil; sun; picturesque; soft, green foliage, pest or disease problem.

Botanical Name	Common Name	Growth Rate	Height	Adaptation and Remarks
<i>Pinus sylvestris</i>	Scots Pine	F	50'	Dry soil; sun; orange bark; bluish needles.
<i>Pseudotsuga menziesii</i>	Douglas Fir	M	70'	Half-shade; flat, dark green needles.
* <i>Tsuga Canadensis</i> ^{RF}	Canada Hemlock	M	75'	Moist soil; soft, feathery foliage.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Medium Evergreen Trees (20 landscaping points)

Botanical Name	Common Name	Growth Rate	Height	Adaptation and Remarks
* <i>Thuja occidentalis</i> ^{RF}	American Arborvitae	M	40'	Wet soil; half-shade; light green, soft, scale-like foliage.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Low Evergreen Trees (10 landscaping points)

Botanical Name	Common Name	Growth Rate	Height	Adaptation and Remarks
<i>Juniperus chinensis</i> "Keteleeri"	Keteleer Juniper	S	20'	Dry soil; sun; green foliage; large fruits.
<i>Juniperus chinensis</i> "Mountbatten"	Mountbatten Juniper	S	20'	Dry soil; sun; narrow, columnar form; large fruits.
* <i>Juniperus virginiana</i> ^{RF}	Eastern Red Cedar	S	20'	Dry soil; sun; brownish winter color.
"Burkii"	Burke Eastern Red Cedar			Fine-textured, gray-green foliage.
"Canaertii"	Canaert Eastern Red Cedar			Dark green, tufted foliage.
"Glauca"	Silver Eastern Red Cedar			Silver-gray foliage; informal habit.
"Hillii"	Hill Dundee Eastern Red Cedar			Gray-green foliage turns purple in winter, no fruits.
* <i>Picea glauca</i> ^{RF} "Densata"	Black Hills Spruce	S	20'	Dry soil; sun; narrow, dense habit.
<i>Taxus cuspidata</i>	Japanese Yew	S	20'	Shade; urban, deep green needles; often sold as <i>Taxus cuspidata</i> "Capitata"
* <i>Thuja occidentalis</i> ^{RF} "Fastigiata"	Pyramidal Arborvitae	M	25'	Narrow columnar form.
* <i>Thuja occidentalis</i> ^{RF} "Techny"	Techny Arborvitae	S	20'	Deep green foliage, year round.
KEY: *Wisconsin native S=Slow M=Medium F=Fast				

Detailed Classification of Plant Species: Tall Deciduous Shrubs (5 landscaping points)

Botanical Name	Common Name	Form	Adaptation and Remarks
* <i>Amelanchier sp.</i> (See also low trees)	Serviceberry	Upright	Shade; alkaline soil; white flowers; edible purple fruits; smooth, gray bark; yellow to orange fall color; fireblight a problem.
<i>Caragana arborescens</i>	Siberian Peashrub	Erect, Oval	Dry, alkaline soils; yellow flowers; green twig.
<i>Chionanthus virginicus</i>	Fringetree	Spreading	Moist soil; shade; white flowers; blue fruits; coarse.
* <i>Cornus alternifolia</i>	Pagoda Dogwood	Spreading	Moist soil; shade; white flowers; blue fruits; horizontal branches; early, maroon fall color.
<i>Cornus mas</i>	Corneliancherry Dogwood	Oval	Shade; urban; yellow flowers in April; flower buds may be injured or killed during some winters; edible red fruits.

KEY: *Wisconsin native**Detailed Classification of Plant Species: Tall Deciduous Shrubs (5 landscaping points) (continued)**

Botanical Name	Common Name	Form	Adaptation and Remarks
* <i>Cornus racemosa</i>	Gray Dogwood	Erect	Dry or wet soils; shade; white flowers; white fruits; purple fall color.
<i>Cornus sericea</i>	Redosier Dogwood	Spreading	Wet, moist soils; tolerates poor drainage; white flowers; white fruits; red twigs; often sold a <i>C. stolonifera</i> .
<i>Cornus sericea baileyi</i>	Bailey Redosier Dogwood	Erect	
<i>Cotoneaster multiflora</i>	Manyflowered Cotoneaster	Mounded	Sun; well-drained soil; white flowers; red fruits; very wide-spreading; pests/diseases.
<i>Elaeagnus umbellata</i>	Autumnolive	Spreading	Poor, dry soil; sun; fragrant flowers; edible, red fruits; twiggy.
<i>Euonymus alata</i>	Winged Euonymus	Spreading	Sun or shade; well-drained soil; corky, winged twigs; pink to rose fall color.
* <i>Euonymus atropurpurea</i>	Eastern Wahoo	Tree-like	Moist soil; shade; tiny, purplish flowers; orange to purple fall color.
<i>Euonymus europaea</i>	Spindletree of European Euonymus	Tree-like	Dry-soil; urban; striped bark; persistent pink fruit; orange to purple fall color.
“Aldenhamensis”	Aldenham European Euonymus		Bright pink fruit; shrubby form
“Redcap”	Redcap European Euonymus		Bright red fruit.
<i>Exochorda racemosa</i>	Pearlbush	Leggy	Sun; pearl-like flower buds; tan fruit capsules.
* <i>Hamamelis virginiana</i>	Common Witchhazel	Spreading	Shade; yellow October flowers.
<i>Hydrangea paniculata</i> “Grandiflora”	Peegee Hydrangea	Upright	Moist soil; white to pink flowers in August; persistent, tan flower clusters.

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Kolkwitzia amabilis</i>	Beautybush	Upright	Alkaline soil; sun; pink flowers in June; shredded bark; leggy.
<i>Ligustrum amurense</i>	Amur Privet	Erect	Dry soil; white flowers; black fruits; hedge plant
<i>Ligustrum vulgare</i> "Cheyenne"	Cheyenne Privet	Erect	Dry soil; urban; white flowers; black fruits; hedge plant.
<i>Lonicera x bella</i> "Candida"	White Belle Honeysuckle	Upright-mounded	Dry soil; white flowers; red fruits; may become weedy, pest problem.
<i>Lonicera tatarica zabelii</i>	Zabel Honeysuckle	Rounded	Dry soil; urban; red flowers; dense, red fruits; may become weedy, pest or disease problem, may be sold as <i>L. korolkowii zabelii</i> .
<i>Magnolia stellata</i>	Star Magnolia	Rounded	Rich soil; white flowers; orange fruits; finest textured magnolia.
* <i>Physocarpus opulifolius</i>	Eastern Ninebark	Vase	Dry soil; semi-shade; white flowers; red, capsular fruit; shredded bark; course.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Tall Deciduous Shrubs (5 landscaping points) (continued)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Prunus tomentosa</i>	Manchu Cherry	Rounded	Dry soil; sun; white flowers; edible, red fruits.
<i>Prunus triloba</i>	Double Flowering Plum	Rounded	Sun; double, pink flowers; no fruit.
<i>Rhamnus frangula</i> "Columnaris"	Tallhedge Glossy Buckthorn	Columnar	Moist soil; shade; red to black fruits; holds leaves late.
* <i>Rhus glabra</i>	Smooth Sumac	Suckering	Dry soil; sun; persistent red fruits; smooth stems; scarlet fall color.
<i>Rhus typhina</i>	Staghorn Sumac	Suckering	Dry soil; sun; persistent red fruits; felty stems; orange to red fall color.
<i>Rhus typhina</i> "Dissecta"	Shredleaf Staghorn Sumac	Picturesque	Dry soil; sun; red fruits; dissected leaves, orange to red in fall.
<i>Salix caprea</i>	Goat Willow or French Pussy Willow	Oval	Wet or dry soil; sun; large silver catkins in early spring.
<i>Shepherdia argentea</i>	Buffaloberry	Irregular	Dry soil; sun; yellowish flowers; dioecious; edible red fruits; silvery foliage.
* <i>Staphylea trifolia</i>	American Bladdernut	Upright	Moist soil; shade; whitish flowers; green to brown, bladder-like fruits; white-striped bark.
<i>Syringa x chinensis</i>	Chinese Lilac	Vase	Dry, alkaline soil; purple-lilac flowers; fine texture.
<i>Syringa x hyacinthiflora</i> cvs.	Hyacinth Lilacs	Upright	Sun; white, pink, lilac, purple flowers; early blooming.
<i>Syringa x prestoniae</i> cvs.	Preston Lilacs	Rounded	Sun; pink to purple flowers; late-blooming; coarse textured.
<i>Syringa reticulata</i>	Japanese Tree Lilac	Tree-like	Sun; white flowers in June; tan fruits; cherry-like

Botanical Name	Common Name	Form	Adaptation and Remarks
			bark; often sold as <i>S. amurensis japonica</i> .
<i>Syringa vulgaris cvs</i>	Common Lilac	Upright	Well-drained soil; sun; white, pink, lilac, purple, fragrant flowers; pest or disease problem may limit use.
<i>Tamarix ramosissima</i>	Tamarisk	Irregular	Dry soil; sun; tiny, pink flowers; very fine texture; often sold as <i>T. pentandra</i> .
<i>Viburnum dentatum</i>	Arrowwood Viburnum	Vase	Moist soil; shade; white flowers in June; blue fruits; maroon fall color.
<i>Viburnum lentana</i>	Wayfaringtree Viburnum	Upright	Dry soil; shade; white flowers; red to black fruits; late maroon fall color.
* <i>Viburnum lentago</i>	Nannyberry Viburnum	Upright	Moist or dry soil; sun or shade; white flowers; black fruits; leggy; maroon fall color; pest or disease problem.
* <i>Viburnum prunifolium</i>	Blackhaw Viburnum	Spreading	Dry soil; shade; white flowers; black fruits; single or multi-trunked; maroon fall color.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Tall Deciduous Shrubs (5 landscaping points) (continued)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Viburnum sieboldii</i>	Siebold Vibernum	Tree-like	Rich soil; white flowers; red to black fruits; large, coarse leaves.
<i>Viburnum trilobum</i>	American Cranberrybush Vibernum	Upright	Moist soil; shade; lacy, white flowers; persistent, edible fruits.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Medium Deciduous Shrubs (3 landscaping points)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Aronia arbutifolia</i>	Red Chokeberry	Erect	Wet soil; shade; tolerates poor drainage; white flowers; red fruits; red fall color.
<i>Cornus alba</i> “Argenteomarginata”	Creamedge Dogwood	Mounded	Moist soil; white flowers; white fruit; variegated foliage.
* <i>Corylus americana</i>	American Filbert or Hazelnut	Rounded	Dry soil; shade; catkins in March; orange fall color.
<i>Cotoneaster divaricatus</i>	Spreading Cotoneaster	Mounded	Dry alkaline soil; red fruits; fine texture; late maroon fall color; not fully hardy in zone indicated—needs a special site or ideal conditions.
<i>Cotoneaster lucidus</i>	Hedge Cotoneaster	Upright	Dry soil; shade; black fruits; orange to maroon fall color; good hedge plant; <i>C. acutifolius</i> is similar.
<i>Euonymus alatus</i> “Compacta”	Dwarf Winged Euonymus	Spreading	Sun or shade; pink and orange fruits; red fall color.
<i>Forsythia x intermedia</i> <i>cvs.</i>	Border Forsythia	Vase	Sun; urban; large, pale to yellow flowers; flower buds may be injured or killed at temperatures

Botanical Name	Common Name	Form	Adaptation and Remarks
			lower than -14°F.
<i>Forsythia ovata</i>	Early Forsythia	Mounded	Sun; urban; smaller, earlier, yellow flowers; flower buds may be injured or killed at temperatures lower than -25°F.
<i>Forsythia suspensa</i>	Weeping Forsythia	Mounded	Sun; urban; yellow flowers; slender, drooping twigs; flower buds may be injured or killed at temperatures lower than -15°F.
* <i>Ilex verticillata</i>	Winterberry	Upright	Wet, acid soil; tolerates poor drainage; dioecious; red fruits.
<i>Ligustrum obtusifolium regelianum</i>	Regel's Border Privet	Spreading	Dry soil; shade; white flowers; blue-black fruits; late, purple fall color.
<i>Malus sargentii</i> "Tina"	Sargent Crabapple	Spreading	Disease resistant; 5' mature height.
<i>Myrica pensylvanica</i>	Bayberry	Upright	Dry soil; sun; gray, fragrant fruits; dioecious; semi-evergreen; suckering.
<i>Philadelphus x virginialis</i> "Glacier"	Glacier Mockorange	Rounded	Sun; double, white, fragrant flowers.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Medium Deciduous Shrubs (3 landscaping points)
(continued)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Prunus x cistena</i>	Purple-leaved Sand Cherry	Rounded	Dry soil; sun; white flowers; purple foliage all season.
<i>Rhodotypos scandens</i>	Jetbead	Spreading	Dry soil; shade; white flowers; sparse red fruits; fine texture.
<i>Rosa hugonis</i>	Father Hugo Rose	Vase	Poor soil; sun; yellow flowers; sparse red fruits; fine texture.
<i>Rosa rugosa cvs.</i>	Rugosa Rose	Rounded	Dry soil; sun; white, yellow, pink, or red flowers; large edible red fruits; fall color; wrinkled leaves; tolerant of salt.
* <i>Rosa setigera</i>	Prairie Rose	Sprawling-mounded	Sun; pink flowers in July; red fruits; orange fall color; can be used as a climber.
<i>Spiraea prunifolia</i>	Bridalwreath Spirea	Upright	Sun; double, white flowers; orange to red fall color.
<i>Spiraea thunbergii</i>	Thunberg Spirea	Vase	Sun; white flowers; yellow to orange fall color; fine-textured.
<i>Spiraea x vanhouttei</i>	Vanhoutte Spirea	Vase	Sun; white flowers; arching branches.
<i>Syringa meyeri</i> "Palibin"	Palibin Lilac	Rounded	Sun; purple flowers; dense; fine-textured; good informal hedge plant often sold as <i>S. palibiniana</i> .
<i>Viburnum carlesii</i>	Koreanspice Viburnum	Rounded	Shade; urban; pink to white, fragrant flowers; blue-black fruits; red fall color.
* <i>Viburnum cassinoides</i>	Witherod Viburnum	Rounded	Wet, acid soil; tolerates poor drainage; white

Botanical Name	Common Name	Form	Adaptation and Remarks
			flowers; pink to red to blue fruits; red fall color.
<i>Weigela florida</i>	Old-fashioned Weigela	Spreading	Well-drained soil; pink, funnel-shaped flowers.
<i>Weigela x 'Vanicekii'</i>	Vanicek Weigela	Spreading	Well-drained soil; red flowers.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Low Deciduous Shrubs (1 landscaping point)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Acanthopanax sieboldianus</i>	Fiveleaf Aralia	Upright	Dry soil; shade; urban; leaves palmately compound; thorny.
* <i>Amelanchier stolonifera</i>	Running Serviceberry	Suckering	Dry soil; shade; white flowers; edible fruits; orange fall color.
* <i>Aronia melanocarpa</i>	Black Chokeberry	Suckering	Wet soil; shade; white flowers; black fruits; red fall color.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Low Deciduous Shrubs (1 landscaping point) (continued)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Berberis thunbergii</i>	Japanese Barberry	Mounded	Dry soil; shade; red fruits; orange fall color; thorns; good hedge plant.
“Atropurpurea”	Redleaf Japanese Barberry		Sun; red summer foliage.
“Crimson Pygmy”	Crimson Japanese Barberry	Low-mound	Sun; red summer foliage; 2' tall.
<i>Buxus microphylla koreana</i>	Korean Littleleaf Box	Rounded	Shade; broadleaf evergreen; good hedge plant.
<i>Chaenomeles japonica alpina</i>	Dwarf Japanese Floweringquince	Spreading	Dry soil; urban; orange flowers; yellow, edible fruits; dense; 1' tall; flower buds may be injured or killed during some winters.
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster	Mounded	Dry soil; red fruits; red fall color.
<i>Deutzia x lemoinei</i> “Compacta”	Compact Lemoine Deutzia	Rounded	Well-drained soil; white flowers.
* <i>Diervilla lonicera</i>	Dwarf Bushhoneysuckle	Mounded	Dry soil; shade; yellow flowers; good bank cover.
<i>Forsythia viridissima</i> “Bronxensis”	Bronx Forsythia	Low-mound	Sun; small yellow flowers; fine texture; purple fall color.
<i>Hydrangea arborescens</i> “Annabelle”	Annabelle Hydrangea	Mounded	Moist soil; shade; white, clustered flowers; dense; blooms on new wood.

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>Hydrangea arborescens</i> "Grandiflora"	Snowhill Hydrangea	Mounded	Smaller flower clusters and less dense than <i>Hydrangea arborescens</i> "Annabelle."
* <i>Hypericum kalmianum</i>	Kalm's St. Johnswort	Rounded	Dry soil; sun; yellow flowers; shiny brown twigs.
<i>Lonicera x xylosteoides</i> "Clavey's Dwarf"	Clavey's Dwarf Honeysuckle	Rounded	Dense growth; good hedge or screening plant.
<i>Lonicera xylosteum</i> "Nanum"	Emerald Mound Honeysuckle	Mounded	Lower growing than preceding; 2'-3'.
<i>Mahonia aquifolium</i> "Mayhan"	Mayhan Oregongrape	Suckering	Shade; urban; yellow flowers; blue fruits; holly-like evergreen foliage; not fully hardy in zone - need special site or ideal conditions.
<i>Philadelphus coronarius</i> "Aureus"	Golden Mockorange	Rounded	Sun; white flowers; yellow summer foliage.
<i>Philadelphus x lemoinei</i> "Mont Blanc"	Mont Blanc Mockorange	Mounded	Sun; single; white, fragrant flowers; dense.
<i>Physocarpus opulifolius</i> "Nanus"	Dwarf Common Ninebark	Rounded	Dry soil; shade; creamy-white flowers; red capsular fruits; shredded bark.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Low Deciduous Shrubs (1 landscaping point) (continued)

Botanical Name	Common Name	Form	Adaptation and Remarks
<i>*Potentilla fruticosa</i> cvs.	Bush Cinquefoil	Mounded	Dry soil; sun; yellow and white flowers; blooms all summer.
<i>Prunus glandulosa</i> "Sinensis"	Pink Dwarf Floweringalmond	Rounded	Sun; light soil; double, pink flowers; no fruits; narrow leaves.
<i>Rhododendron x kosteranum</i>	Mollis Hybrid Azaleas	Spreading	Moist, acid soil; pink flowers; red fall color.
<i>Rhododendron x</i> "PJM Hybrid"	PJM Hybrid Rhododendron	Rounded	Moist, acid soil; shade; lavender flowers; evergreen leaves turn purple in autumn.
<i>*Rhus aromatica</i>	Fragrant Sumac	Mounded	Dry soil; sun; red fruits; fragrant foliage; turns orange-maroon in fall.
"Gro-Low"	Gro-low Fragrant Sumac		Uniform 2 1/2' height; glossy leaves.
<i>Ribes alpinum</i>	Alpine Currant	Rounded	Shade; urban; good hedge plant.
<i>Rosa virginiana</i>	Virginia Rose	Suckering	Dry soil; pink flowers; red fruits; red stems; good bank cover.
<i>Salix repens argentea</i>	Silver Creeping Willow	Spreading	Moist soil; sun; silvery foliage.
<i>Spiraea x arguta</i> "Compacta"	Compact Garland Spirea	Mounded	Sun; white flowers; fine texture.
<i>Spiraea x billiardii</i>	Billiard Spirea	Upright	Sun; pink flowers, in July and August.
<i>Spiraea x bumalda</i> "Anthony Waterer"	Anthony Waterer Spirea	Rounded	Dry soil; sun; raspberry red flowers; unattractive fruits.
<i>Spiraea x bumalda</i> "Froebelii"	Froebel Spirea	Rounded	Dry soil; sun; raspberry red flowers; orange to maroon fall color.
<i>Spiraea japonica alpina</i>	Daphne Spirea	Low-mound	Sun; pale pink flowers in July; 10" height.
<i>Spiraea nipponica</i> "Snowmound"	Snowmound Spirea	Mounded	Sun; white flowers; blue-green foliage; possible disease problem.
<i>Symphoricarpos rivularis</i>	Snowberry	Vase	Dry soil; shade; tiny pink flowers; showy white fruits; often sold as <i>S. albus laevigatus</i> .
<i>Symphoricarpos orbiculatus</i>	Indiancurrant Coralberry	Suckering	Dry soil; shade; pink fruits; good bank cover.
<i>Viburnum opulus</i> "Compactum"	Compact European Cranberrybush Viburnum	Rounded	Shade; white flowers; persistent, red fruit; dense habit.
<i>Viburnum opulus</i> "Nanum"	Dwarf European Cranberrybush Viburnum	Globe	Shade; no flowers or fruits; twiggy.
KEY: *Wisconsin native			

Detailed Classification of Plant Species: Medium Evergreen Shrubs (5 landscaping points)

Botanical Name	Common Name	Height	Form	Adaptation and Remarks
<i>Juniperus chinensis</i>				
“Ames”	Ames Juniper	9'	Broad pyramid	Sun; bluish green foliage.
“Blaauw”	Blaauw Juniper	4'	Upright-vase	Sun; grayish blue foliage.
“Herzii”	Herz Blue Juniper	15'	Ascending-Spreading	Sun; silvery blue foliage.
“Maney”	Maney Juniper	6'	Upright, bushy	Sun; bluish green foliage.
“Old Gold”	Old Gold Juniper	4'	Spreading	Sun; green with gold tips.
“Pfitzerana”	Pfitzer Juniper	6'	Wide-spreading	Sun; green foliage; no fruits.
“Pfitzerana Glauca”	Blue Pfitzer Juniper	5'	Spreading	Sun; blue-gray foliage.
* <i>Juniperus communis depressa</i>	Oldfield Common Juniper	4'	Spreading	Dry soil; sun; light green; brownish in winter.
<i>Juniperus sabina</i> “Von Ehren”	Von Ehren Savin Juniper	4'	Spreading	Dry soil; sun; light green; brownish in winter.
<i>Juniperus squamata</i> “Meyeri”	Meyer Singleseed Juniper	5'	Picturesque	Sun; blue foliage.
<i>Picea glauca</i> ^{RF} “Conica”	Dwarf Alberta Spruce	7'	Pyramidal	Shelter from winter sun; light green foliage.
<i>Pinus mugo</i>	Mugo Pine	4'	Mounded	Dry soil; sun; green foliage.
<i>Taxus cuspidata</i> “Expansa”	Spreading Japanese Yew	6'	Spreading	Shade; urban; dark green foliage; needs ideal conditions.
<i>Taxus cuspidata</i> “Nana”	Dwarf Japanese Yew	4'	Mounded	Shade; urban very dark green foliage; needs ideal conditions.
<i>Taxus x hunnewelliana</i>	Hunnewell Yew	6'	Spreading	Shade; green
<i>Taxus x media cvs.</i>	Anglojapanese Yew	1-10'	Round or upright	Shade; very dark green; needs ideal conditions.
<i>Thuja occidentalis</i> ^{RF} “Robusta”	Ware American Arborvitae	8'	Broad Pyramid	Wet soil; half-shade; dark green foliage. Often sold as <i>T.o.</i> “Wareana”
<i>Thuja occidentalis</i> ^{RF} “Woodwardii”	Woodward Globe American Arborvitae	6'	Globe	Wet soil; half-shade; bright green.
KEY: *Wisconsin native				

Detailed Classification of Plant Species: Low Evergreen Shrubs (3 landscaping points)

Botanical Name	Common Name	Height	Form	Adaptation and Remarks
<i>Juniperus chinensis procumbens</i>	Japanese Garden Juniper	2'	Creeping	Sun; blue-green, year-round foliage.
<i>Juniperus chinensis sargentii</i>	Sargent Juniper	1'	Creeping	Sun; green; or blue-green in cv. "Glauca"
* <i>Juniperus horizontalis</i>	Creeping Juniper	1'	Creeping	Dry soil; sun; variable color-brown in winter.
"Bar Harbor"	Bar Harbor Juniper	8"	Creeping	Dry soil; sun; bluish green foliage; salty in winter.
"Douglasii"	Waukegan Juniper	18"	Creeping	Dry soil; sun; steel blue; purplish in winter.
"Plumosa"	Andorra Juniper	18"	Radial-creeping	Dry soil; sun; gray-green; purplish in winter.
"Prince of Wales"	Prince of Wales Juniper	4-6"	Prostrate	Dry soil; sun; bright green; bronzed in winter.
"Wiltonii"	Blue Rug Juniper	4-6"	Flat-trailing	Dry soil; sun; silvery blue.
"Youngstown"	Youngstown Juniper	18"	Radial-creeping	Dry soil; sun; gray-green; purplish in winter.
<i>Juniperus sabina</i>				
"Arcadia"	Arcadia Savin Juniper	18"	Low-spreading	Sun; green.
"Broadmoor"	Broadmoor Savin Juniper	2'	Mounded	Sun; soft grayish green; fine textured.
"Skandia"	Skandia Savin Juniper	12"	Low-spreading	Sun; grayish blue.
"Tamariscifolia"	Tamarix Savin Juniper	2'	Dense, spreading	Sun; bluish green; pest or disease problem.
KEY: *Wisconsin native				

Detailed Classification of Plant Species: Non-Contributing Species (0 points)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
<i>Acer negundo</i>	Boxelder			Weed tree.
	Buckthorn			Invasive
	Crown Vetch			Invasive ground cover; aggressive.
<i>Crataegus crus-galli</i>	Cockspur Hawthorn	S	Spreading	Urban; sun; persistent, brick red fruits; orange to red fall color; evil thorns.
KEY: *Wisconsin native				

Detailed Classification of Plant Species: Non-Contributing Species (0 points) (continued)

Botanical Name	Common Name	Growth Rate	Form	Adaptation and Remarks
* <i>Gleditsia triacanthos</i> ^{RF}	Common Honeylocust	F	Vase	Urban; tolerates poor drainage; salt tolerant; dioecious, females produce pods; fine-textured foliage; wicked thorns; yellow fall color; pest or disease problems may limit use.
<i>Lonicera x bella</i>	Belle Honeysuckle			Dry soil, white flowers; red fruits; <i>may become weedy</i> , pest problem.
<i>Lonicera tatarica</i>	Tatarian Honeysuckle			Dry soil; urban, pink to white flowers; dense, red fruits; <i>may become weedy</i> , pest or disease problem.
<i>Lonicera morrowi</i>	Morrow Honeysuckle			Urban, dense, white flowers, pest and disease problem, <i>weedy</i> .
	Purple Loosestrife			Perennial, common marsh plant, may choke out native plants.
<i>Rhamnus cathartica</i>	Common Buckthorn			Becomes weak.
<i>Rhamnus frangula</i>	Glossy Buckthorn			Becomes weak.

^{RF} refers to reforestation. Marked species are native to Wisconsin, and recommended for reforestation efforts by the Wisconsin DNR. (See Section 78.609.)

The following sources were used in compiling the preceding lists of plant species:

Department of Natural Resources. *Forest Trees of Wisconsin: How to Know Them*. Madison, Wisconsin: Department of Natural Resources, 1987.

Hasselkus, E.R. *A Guide to Selecting Landscape Plants for Wisconsin*. Madison, Wisconsin: College of Agricultural and Life Sciences University of Wisconsin - Extension, Cooperative Extension Programs, 1982.

Hightshoe, Gary L. *Native Trees, Shrubs, and Vines for Urban and Rural America: A Planting Design Manual for Environmental Designers*. New York: Van Nostrand Reinhold, 1988.

Iowa State University. *Landscape Plants for Iowa*. Ames, Iowa: Iowa State University Cooperative Extension Service, May 1984.

APPENDIX B

LIST OF OFFICIAL ZONING MAP AMENDMENTS

Property Address/Description	Acres	Zoning		Date of Council Action	Ordinance Number
		From	To		
219 W. Wisconsin Avenue	0.36	TR	IP	10/9/2013	13-0846
North of Lisbon Road, West of Rosenow Creek	21.93	SR	RML	6/18/2013	13-0845
South of Lake Drive (C.T.H. "Z"), West of Rosenow Creek	5.80	SR	IP		

updated: 11.14.13

OVERCROWDING	
GENERAL CONSIDERATIONS	
<i>Issues</i>	Respiratory diseases
<i>Type of indicator</i>	Exposure (proximal)
<i>Rationale</i>	The increased likelihood of disease transmission that occurs in overcrowded environments, means that occupational densities are an important risk factor for a wide range of respiratory diseases, including pneumonia, tuberculosis and many allergies.
<i>Issues in indicator design</i>	Overcrowding can probably best be measured in terms of the average living area per person in the place of residence. Alternatively, if a suitable norm or target for 'overcrowding' can be defined (e.g. the minimum acceptable living area per person), it can be computed as the percentage or number of children living in overcrowded homes. In either case, however, information is needed on both the number of residents in each home and the available living area: the latter, especially, is not always available and can be difficult to define, especially where people spend large amounts of time outdoors, where homes comprise multiple, separate units or in nomadic/semi-nomadic communities. Alternatively, the indicator may be expressed simply as the average number of people per dwelling unit. Clearly this is less satisfactory since it takes no account of the size of the dwelling unit. Problems may also exist in this case in defining a dwelling. UNCHS (1995) define this as 'a space in a housing unit, or other living quarters enclosed by walls reaching from the floor to the ceiling or roof covering, at least to a height of two metres, of a size large enough to hold a bed for an adult'
SPECIFICATION	
<i>Definition</i>	Average floor area per person
<i>Terms and concepts</i>	<p>Floor area: area (m²) of usable floorspace in occupied dwellings.</p> <p>Dwelling: a housing unit or other living quarters, enclosed by walls at least 2 metres high and completely covered by a ceiling or roof, forming an area large enough to hold a bed for an adult.</p> <p>Total resident population: total number of people resident in the area (whether or not they live in a dwelling as defined above).</p>
<i>Data needs</i>	<p>Total floor area in occupied dwellings</p> <p>Total resident population</p>
<i>Data sources, availability and quality</i>	<p>Data on the floorspace in dwellings may be obtainable from national censuses, in which case data are likely to be reliable. Where census statistics are not available, information may be collected through household surveys. Estimates may also be made from aerial photographs, satellite imagery or maps, if necessary.</p> <p>Data on total resident population should also usually be available from routine censuses and should thus be of a reasonable standard.</p>
<i>Level of spatial aggregation</i>	Community or administrative district
<i>Averaging period</i>	Annual or longer term
<i>Computation</i>	<p>The indicator can be computed as:</p> <p style="text-align: center;">P_{tot} / F_{avail}</p>

	<p>where: P_{tot} is the total resident population; F is the available floorspace in dwellings.</p>
<i>Units of measurement</i>	Square metres per person
<i>Worked example</i>	<p>Assume that an area has a population of 13 750 people and a total floor space in dwellings of 92 125 m². In this case, the value of the indicator is:</p> $92\ 125 / 13\ 750 = 6.7\ \text{m}^2/\text{person}$
<i>Interpretation</i>	<p>This indicator can be interpreted as a measure of the degree of overcrowding in households: the higher the indicator value, the more overcrowded housing conditions are. As such, it indicates risks of respiratory (and other) infections in children.</p> <p>For several reasons, however, the indicator needs to be interpreted with care. The first is that, like any indicator based on a measure of central tendency, it takes no account of the degree of spread within the population. Thus, a small number of very large houses may bias the indicator value upwards. Problems may also occur in obtaining consistent measures of floorspace. Variations in the quality of this floorspace are also not shown by the indicator.</p>
<i>Variations and alternatives</i>	<p>This indicator can be defined and computed in many different ways. One alternative, which may be more appropriate at the local scale, is to compute the median available floorspace per person. This can be calculated by measuring the floorspace per person in each household separately, ranking these, and then taking the midpoint (50th percentile) value. This has the advantage of being less affected by extreme values. Other alternatives include number of persons/bedroom, bedroom area/person, number of persons/room, number of persons/housing unit. Each of these indicators may also be computed in terms of the number of children (rather than total population), though to do so can be misleading since variations may reflect variations in family structure, rather than degree of overcrowding.</p> <p>Another alternative is to calculate the number or percentage of children living in overcrowded households. This requires an explicit definition of 'overcrowding'; one such definition (Abu Helwa and Birch 1993) is 2.5 persons per room. Thus all children living in households with more than 2.5 persons per room would be classed as overcrowded.</p>
<i>Examples</i>	<p><i>UNCHS Monitoring human settlements with urban indicators</i></p> <ul style="list-style-type: none"> • Average household size
<i>Useful references</i>	<p>Abu Helwa, M. and Birch, B. 1993 The demography and housing conditions of Palestinian refugees in and around the camps in Amman, Jordan, <i>Journal of Refugee Studies</i>, 6 (4), 403-13.</p> <p>Clauson-Kaas, J. <i>et al.</i> 1996 Urban health: human settlement indicators of crowding," <i>Third World Planning Review</i> 18 (3), 349-63.</p> <p>UNCHS (Habitat) 1995 <i>Human settlement interventions addressing crowding and health issues</i>. Nairobi: United Nations Centre for Human Settlements.</p> <p>UNCHS Urban Indicators Programme: http://www.urbanobservatory.org/indicators/database/</p> <p>Marshy, M. 1999 <i>Social and Psychological Effects of Overcrowding in Palestinian Refugee Camps in the West Bank and Gaza. Literature Review and Preliminary Assessment of the Problem</i>. International Development Research Centre, Ottawa, Canada. (Available at http://www.arts.mcgill.ca/MEPP/PRRN/marshy.html#2)</p>