

ARTICLE 1 JURISDICTION, DISTRICTS, AND MAPS

DIVISION 1.000 PURPOSE

Section 1.101 Purpose

This article identifies the Jurisdiction Land Development Ordinance (LDO), what the ordinance covers, the districts into which the municipality is divided, and the zoning map. The purposes and uses of the zoning districts are set forth for rural, sub-urban, and urban areas.

Section 1.102 Land Development Ordinance (LDO)

The Jurisdiction Land Development Ordinance is referred to herein as the “ordinance” or LDO. It combines what had previously been a zoning ordinance, subdivision, and land development ordinance, and sign regulations.

Section 1.103 Effective Date

{Sidebar}

Several versions of this section are provided, ranging from strict to lenient approaches. The strict approach (A) is intended to prevent a rush to get subdivisions approved under the prior code and get new standards in place early. The least strict approach (E) allows new development to be approved if applications are received before adoption.

{/Sidebar}

- A. The first complete draft of this code was made public on 12 April 2017 and adopted as an interim regulation on that date. Any development conforming to this or subsequent modifications may be approved under those regulations. Any development under the existing regulations submitted after that date shall be treated as a conditional use and processed as such under the prior regulations. OR
- B. This LDO became effective on 14 March 2018, the date of adoption, and all development not approved prior to 15 September 2016 shall be required to conform to the LDO. Developments under construction prior to 15 September 2016 shall be controlled by the regulations in place when they were approved. OR
- C. This LDO became effective on 14 March 2018, the date of adoption, and all development having received final approval prior to that date shall be controlled by the regulations in place when they were approved. OR
- D. This LDO became effective on 14 March 2018, the date of adoption, except for land developments or subdivisions that, having received preliminary approval prior to that date, shall be controlled by the regulations in effect at that time. OR
- E. This LDO became effective on 14 March 2018, the date of adoption. Land developments or subdivisions that have been accepted as complete applications prior to that date shall be controlled by the regulations in effect at that time.

DIVISION 1.200 JURISDICTION

Section 1.201 Regulations Control

The following activities are governed by the LDO and all such activities must conform to the regulations herein. Undertaking any of these activities without proper permits is illegal.

- A. Use. Any use of structure, building, land, or water is governed by the LDO. Every new, modified, or expanded use shall require a zoning certificate and a certificate of occupancy. The use of any lot or parcel not involving a building shall require a zoning certificate.
- B. Land Disturbance or Alteration. Any disturbance or alteration of greater than 1,000 square feet of land, soil, vegetation, or waterways for development or other purposes shall conform to the standards contained in this LDO and shall require a permit prior to commencing any work. If such disturbance involves a resource protected by this LDO, a permit shall be required regardless of the land area disturbed.
- C. Subdivision, Division, and Land Development. Any division of land into lots, parcels, or condominiums for sale, whether by metes and bounds or a plat, shall be a "subdivision." The division of a parcel of land or building into condominium or lease space shall be a "land development." Both shall comply with all regulations and standards contained in this LDO.

Section 1.202 Legislative Exemptions

The following activities are exempted from the regulations of this ordinance. However, the jurisdiction shall seek to work cooperatively with these agencies to provide coordination.

- A. Public Schools. By state law, public schools are exempted from regulation by this LDO.
- B. Federal and State Property. Land owned by these governments is exempt from this LDO.

Section 1.203 Exemptions

The following activities are specifically exempted from the regulations of this LDO.

- A. Tilling. The tilling of the land is exempted from a permit as required in 1.201 but clearing for agriculture involving protected resources (Article 3) is not.
- B. Public Roads. New or extended public roads that are not part of a subdivision or land development are exempt when the right-of-way is acquired by the jurisdiction or state.
- C. Internal Reconstruction. The internal reconstruction of a building into new room arrangements is not controlled by the LDO provided there is no increase in floor area, setbacks, or height. Note: Building permits are required by the jurisdiction building code.

DIVISION 1.300 RURAL DISTRICTS

Section 1.301 Zoning Districts

The jurisdiction is hereby divided into districts as listed in Table 1.301 and shown on the jurisdiction's zoning map (not included in model). All these districts provide for a rural community character. There are use districts that provide for uses needed in rural areas that contribute to the rural economy. There are also overlay districts that address unique situations in a rural area that has geographic locations where the

overlay is better suited than a zoning district. The character of the districts is controlled by permitted uses (Article 2) and intensity of development (Article 3).

Section 1.302 Wilderness (W) District

The purpose of the W district is to allow preserving wilderness areas. Very minimal residential uses are permitted to provide some economic use of private land by allowing some residential development. It is designed to minimize predator/human conflicts and buffer federal lands.

- A. Land Use. Uses compatible with preserving the wilderness ecology and habitat are permitted. On private land, clustered development at very low densities with a minimum of 99 percent open space is permitted, with location at the edge of the district.
- B. Economy. The economy is oriented to limited use of the wilderness land or waters for sustainable use by visitors seeking a wilderness experience. Very limited residential development that pays for the preservation of wilderness land is permitted.
- C. Utilities. The developer provides community sewer and water services. Waste disposal shall be designed to not attract or allow predators access.

Table 1.301 Rural Zoning Districts		
Character Class	Character	Prior Code Districts
Character Districts		
Rural	Wilderness (W)	
	Natural (N)	
	Agriculture (AG)	A
	Countryside (CS)	R-1
	Unincorporated Place (UP)	R-1
Use Districts		
	Neighborhood Conservation (NC)	District preserves areas that would become nonconforming
	Mining (M)	M
	Holding Zone (HZ)	-
	Airport (A)	I
Special Districts		
	Interstate Commercial (IC)	
	Rural Industry (RI)	
	Rural TDR Overlay (RO)	

Section 1.303 Natural (N) District

The purpose of the N district is to preserve a natural character of woodland, savannah, or prairie, and specifically:

- A. Land Uses. The purpose is to promote land uses for silviculture, forestry, recreation, or wildlife habitat. Uses needed to support forestry or recreation are permitted. Residential uses at low densities with more than 95 percent open space are permitted.
- B. Economy. The economy of this district relies on silviculture or recreation and some support activities.
- C. Utilities. Water and wastewater services are to be provided, either on-lot or via community wells and land treatment systems built by the developer.

Section 1.304 Agriculture (AG) District

The purpose of the AG district is to preserve land for agriculture uses and preserve a rural community character of farms, cropland, pastures, orchards, or fiber crops.

- A. Land Uses. The purpose is to promote the designated agricultural land uses. Residential uses are very highly clustered at low densities, preserving the predominance of land (minimum 90 percent) for agriculture.
- B. Economy. The economy of this district is based on agricultural production along with some processing or shipping of agricultural products.
- C. Utilities. Water and waste water services are to be provided, either on-lot or via community wells and land treatment systems built by the developer.

Section 1.305 Countryside (CS) District

The purpose of the CS district is to preserve a rural countryside character with a predominance of agriculture or natural habitats.

- A. Land Uses. The purpose of this district is to provide rural or exurban residential development while retaining most of the land in agricultural or natural habitats. Residential uses are very highly clustered at low density with at least 80 percent open space.
- B. Economy. The economy of this district is based on agriculture, recreation, and silviculture as the dominant land uses while allowing landowners the opportunity to increase the value of their land by permitting residential development on a portion of their land. Residents commute to work or shop.
- C. Utilities. Water and wastewater services are to be provided, either on-lot or via community wells and land treatment systems built by the developer.

Section 1.306 Holding Zone (HZ)

{Sidebar}

This district is an alternative to the CS district for municipalities that want to manage growth rather than preserve the rural economy.

{/Sidebar}

The holding zone is an area at the edge of a jurisdiction that is set aside for future growth where utilities are unavailable for the foreseeable future. It permits interim residential development (Sections 11.208–11.211) that does not require public facilities. Partial development allows an economic return for a current landowner while infrastructure is unavailable. It limits development so that development with on-site facilities will not burden the extension of infrastructure for future development.

Section 1.307 Unincorporated Place (UP)

This district recognizes small unincorporated rural places or communities that presently exist. Their economic function is or was to serve the rural population. They are intended to provide a nucleus for some additional development to insure a stable future. A boundary tightly drawn about existing development preserves the area's rural character while allowing limited new development.

- A. Land Use. The new land uses are predominantly residential, with open space as a green belt to preserve the rural landscape around the existing community.
- B. Economy. Such areas typically provide some commercial uses that serve a larger rural area and travelers on the roads running through the area. They also provide limited new residential uses.
- C. Utilities. Water and wastewater services are to be provided, either on-lot or via a community well and sewer system.

Section 1.308 Neighborhood Conservation (NC) District

The purpose of this district is to recognize scattered existing subdivisions having an estate character. It is intended to protect residential uses from becoming nonconforming. It is not intended to permit new subdivisions or new housing, except on vacant platted lots in these developed areas.

- A. Land Uses. Preexisting residential subdivisions.
- B. Economy. This district has no economic function and relies on other districts or jurisdictions for work and shopping.
- C. Utilities. Water and wastewater services are to be provided by on-site wells or individual septic systems, or existing sewer or water systems.

Section 1.309 Mining (M) District

The mining district provides for mining and limited processing of raw material. This is a district whose character is determined by the mining activities and the equipment on-site.

- A. Land Uses. The purpose is to permit mining activities and to buffer or mitigate their impact on uses outside the district. Some industrial or home-based businesses may be permitted that are compatible with mining.
- B. Economy. The economy of this district is based on the mining of natural resources such as stone, metals, minerals, and sand.
- C. Utilities. Water and waste water services are to be provided by on-site wells and individual septic systems. Specially designed waste water treatment may be required to ensure ground and surface water quality.

Section 1.310 Special or Overlay Districts

These districts alter permitted uses in either the Natural (N) or Agriculture (AG) districts in areas that meet the criteria below. They permit other uses that are not permitted in the district except in accordance with the following standards.

- A. Rural Transferable Development Rights Overlay District (RO). This designation can be applied to either AG or N districts. It designates a sending zone for transferable development rights (TDR) and provides owners with TDRs.

1. The jurisdiction makes an allocation of TDRs to all landowners in the overlay district. It permits the sale of TDRs to landowners in zones identified as receiving zones for the purchase of TDRs.
 2. The density in the overlay district is limited to one dwelling unit per 80 acres (0.0125 TDR per acre).
- B. Interstate Commercial (IC) District. This district permits commercial uses, including gas stations, convenience stores, restaurants, and commercial lodging. It is limited to land within 1,500 feet of interchanges on I-101 with specified State Roads 39 and 62.
- C. Rural Industry (RI) Overlay District. This district permits industrial uses that store, process, or ship agricultural or timber products, sell farm equipment and supplies, or involve other service businesses that support agriculture or forestry. It is located on the Mountain and River Railroad at least 10 miles from a municipal boundary on the rail line and on a state highway. They shall be at least 20 miles from any existing area zoned RI. The maximum area of this overlay is 200 acres.

Section 1.311 Rural District

{Sidebar}

This district is designed for a county or township that wants to adopt zoning, but where the politics of drawing district boundaries make this difficult. The rural district provides for a zoning ordinance that permits only one district, rather than several of the aforementioned districts. The one-district ordinance eliminates the inequities created by multi-district ordinances where the districts have different land values.

{/Sidebar}

The rural district provides for all uses found in rural areas. This is done by having a variety of development forms that range from single-use to developments that create communities. Eligibility for particular development forms is dependent on the size of the property, the ability of the landowner to provide water and sewer services, and access to road capacity. Together, all these regulations preserve a rural character.

- A. Land Uses. Agriculture, forestry, or wildlife habitat forms the dominant land cover. Residential development for single-family homes is limited to small holdings. Cluster forms and hamlets and villages allow higher intensities and community businesses. Industrial uses are permitted only in villages.
- B. Economy. This district is designed to preserve the rural economy, with limited residential and commercial uses that support rural residents.
- C. Utilities. Water and wastewater services are to be provided by on-site wells and individual septic systems for agriculture, other rural uses, and small cluster developments. For larger clusters, hamlets, and villages, public water and sewer systems are required.

DIVISION 1.400 SUB-URBAN DISTRICTS

Section 1.401 Zoning Districts

The jurisdiction is hereby divided into districts as listed in Table 1.401 and shown on the zoning map (not included in model). All these districts provide for an overall suburban community character. There are use districts that address the need in the suburb for specific uses that contribute to the community economy. There are also overlay districts that address unique situations in the municipality in geographic locations where the overlay is better suited than a zoning district. The character of the districts is controlled by permitted uses (Article 2) and intensity (Article 3).

Section 1.402 Countryside (CS) District

The purpose of the CS district is to preserve a countryside character with a predominance of agriculture or natural habitats on the edge of the jurisdiction and to give the jurisdiction a clear separation from neighboring communities.

- A. Land Uses. The purpose is to promote retention of most of the land in agricultural uses or in natural habitats found in the jurisdiction. Residential uses are very highly clustered with lower density but provide for rural residential living.
- B. Economy. The economy of this district relies on agriculture, recreation, and silviculture, with residents driving to commercial and employment opportunities.
- C. Utilities. Water and waste water services are to be provided, either by on-site wells and land treatment systems or via development-wide public systems built by the developer.

Table 1.401 Sub-Urban Zoning Districts		
Character Class	Character	Prior Code Districts
Character Districts		
Rural	Countryside (CS)	A-1
Sub-Urban	Estate (E)	RE-1, R-1
	Suburban (S)	R -2, R-3, R-4
Urban	Auto-Urban (AU)	R-5, C, O
	Urban (U)	
	Central Business (CB)	R-6, C, O
Use Districts		
	Neighborhood Conservation (NC)	District preserves areas that would become nonconforming
	Redevelopment (RD)	
	Business Park (BP)	T
	Industry (I)	I
	Airport (A)	
Overlay or Special Districts		
	Airport Overlay (AO)	
	Commercial Node Overlay (CNO)	
	CB Expansion Overlay (CBO)	
	Historic Overlay (HO)	
	Auto Mall (AM)	

Section 1.403 Estate (E) District

This district provides for low-density development of an estate character with extensive borrowed open space or very large yards. Landscaping is designed to provide an extensive canopy that shelters buildings and streets and that screens buildings, so they are surrounded by landscape volumes.

- A. Land Uses. The majority of uses are residential. Also permitted are some institutional, recreational, and small-scale nonresidential uses.
- B. Economy. This district provides a place for family living with most residents employed in other districts or jurisdictions. Only minimal employment that supports the residential uses is permitted.
- C. Utilities. On-lot sewer and water facilities or privately owned public systems serving a development are the two permitted methods of providing utility service.

Section 1.404 Suburban (S) District

Borrowed open space and a vegetative canopy that shelters uses are critical to the suburban character. A balance of landscape volumes and building creates the character. More open space allows for higher densities.

- A. Land Uses. A wide range of residential and nonresidential land uses are permitted in this district. The dominant use is residential, with some institutional and neighborhood-scale commercial uses permitted in high-access locations.
- B. Economy. This district is mainly residential and relies on an urban center, use districts, or other jurisdictions to provide employment, community, and regional shopping opportunities.
- C. Utilities. Full public water and sewer services are provided.

Section 1.405 Auto-Urban (AU) District

Auto-urban character is created by reliance on surface parking, which prevents the development of an urban character because surface parking spaces occupy more land than buildings. The district is intended to be located along major roads and its use is limited to where it provides service to highway traffic.

- A. Use. This district provides light auto service uses, restaurants, lodging, and convenience commercial uses at locations where there are high volumes of regional traffic that must be supported.
- B. Economy. Providing services to travelers on major highways is the primary economic purpose of this district.
- C. Parking. At-grade parking and street access for residential areas.
- D. Utilities. Full public water and sewer services are to be provided.

Section 1.406 Central Business (CB) District

The CB district provides an urban character that is intended to be the jurisdiction's center. It is limited to a relatively small portion of the jurisdiction so overall suburban character is maintained.

- A. Land Use. The commercial center of the jurisdiction is of urban character. Most buildings should be multistoried and mixed-use, with office or residential space above commercial space.
- B. Economy. This is the retail and office core intended to support the jurisdiction's community-scale uses and is important in the office economy. It is the administrative and institutional center of the jurisdiction.
- C. Parking. Structured parking.
- D. Utilities. The district is served with full public water and sewer service. Taller buildings require higher water pressures and include the capacity for fire suppression.

Section 1.407 Neighborhood Conservation (NC) District

This district protects the character of existing subdivisions having a range of character from estate to auto-urban. It retains existing standards, insuring that these do not become nonconforming.

- A. Land Uses. The purpose is to protect existing residential development from becoming nonconforming. It is not intended to permit new subdivisions or new housing except on vacant platted lots in these developed areas.
- B. Economy. This district allows for existing residential uses with no economic function.
- C. Utilities. Water and waste water services have already been provided, either on-lot or by public systems.

Section 1.408 Redevelopment (RD) District

This district is intended to provide for the redevelopment of an area that is predominantly single-family, where the desire is to encourage redevelopment with a suburban character.

- A. Land Uses. The purpose is to encourage the replacement of existing deteriorated residential development to enhance the quality of development. It provides for an increased density to furnish an incentive.
- B. Economy. This district encourages some commercial uses to serve the immediate area, and some through traffic if the district has arterial frontage.
- C. Utilities. Water and waste water services have already been provided, either on-lot or by public systems.

Section 1.409 Business Park (BP) District

The BP is a mixed-use district that provides for employment in office and industrial uses. It should have high accessibility by highway and transit. The landscape area and floor area ratios are designed to maintain a suburban character.

- A. Land Use. Office, industrial, warehousing, and wholesale businesses mainly carried out inside buildings are the primary uses, along with supporting restaurants and lodging facilities.
- B. Economy. This district provides for substantial employment that reduces commuting out of the jurisdiction.
- C. Utilities. Full public water and sewer services are required, and plants will have to pretreat sewerage to jurisdictional standards.

Section 1.410 Industry (I) District

The industrial district has a suburban character in terms of landscaped surface and landscaping and is buffered to conceal the quality of the utilitarian buildings.

- A. Land Use. The predominant land use is industrial and warehousing with substantial outdoor storage permitted. Some supporting commercial use is also permitted.
- B. Economy. This district provides for more intensive industrial employment that may have heavy transport requirements in need of rail or air shipping in addition to trucks.
- C. Utilities. Full public water and sewer services are required, and plants will have to pretreat sewerage to jurisdictional standards.

Section 1.411 Airport (A) District

This district covers land controlled by {Insert} (airport name) {/Insert} and governs the permitted uses on that land. It is a use, not a character district.

- A. Land Use. The district provides for airport runways, taxi strips, terminals, repair facilities, parking, and other limited uses.
- B. Economy. This is a major employer, and its presence enhances the community's competitive status by making it more accessible.
- C. Utilities. Full public water and sewer services are required.

Section 1.412 Overlay and Special Districts

These districts alter permitted uses in any of the other zoning districts. They restrict uses or permit other uses that are not permitted in the district except in accordance with the following standards.

- A. Airport Overlay (AO) District. This overlay is established for property outside the boundaries of {Insert} (airport name) {/Insert} to protect persons and property from damage from an air crash or noise from airport operations. The overlay modifies uses, height, and intensity of permitted uses in the underlying district to lower potential damage. A conditional approval is the dedication of an easement limiting construction or development within crash or noise hazard areas. Lastly, it provides for approval of development from the Federal Aviation Administration (FAA).
- B. Commercial Node Overlay (CNO) District. This district prohibits strip commercial development on arterial roads. It requires nodes of commercial development along arterial roads. The uses and intensities are those of the CB district. The following standards govern the location of nodes.
 - 1. The nodes shall be located at the intersections of two arterial roads designated a CNO on the zoning map.
 - 2. The nodes shall be at least 1.5 miles apart.
 - 3. The nodes shall be limited to no more than 10 acres in each quadrant of the intersection or as shown on the zoning map, with a total area of 40 acres.
 - 4. The owners of such areas are required to provide all the required bufferyard where uses adjoin land outside the boundaries of the CNO.
- C. Core Expansion Overlay (CEO) District. Land within 400 feet or an entire block adjoining the existing central business district boundaries may be built to CB district land use and intensity standards, where the property meets the following requirements.
 - 1. It is contiguous to the CB district zoning boundary.
 - 2. The landowner has acquired the entire block, half-block to the alleyway, or lots having a minimum of three acres.
 - 3. No expansion into a NC district is permitted until authorized by an amendment to the comprehensive plan.
 - 4. Where land adjoining the expansion is in residential use, the landowner shall provide a bufferyard meeting the standards of Article 8. The width shall be that specified, with a six-foot wall required abutting the commercial uses. The landscaping should be such that the area serves as a park for

the neighborhood with at least one bench every 100 feet. It shall be offered to the authority as a park or to any homeowners' association.

- D. Auto Mall (AM) District. This district allows the development of auto malls consisting of at least six automobile dealerships. It shall have direct access to an arterial road within 660 feet of an intersection with another arterial or collector road. It covers a minimum of 20 acres and will be buffered with a 0.8 opacity buffer.

Section 1.413 Transitions

Transitions are areas along district boundaries of S with AU or U, or where a new residential development abuts commercial or employment areas. The density in the S district is increased in the transition area. The following rules apply.

- A. Intensity. The density in the transition area shall be increased by 15 percent over that permitted in the district.
- B. District Boundary. The transition applies to the outer 250 feet of the S district.
- C. Retail. The transition abutting retail commercial that extends along the entire border of the property plus 100 feet shall be 400 feet in width.
- D. Employment. The transition adjoining an employment center of at least 150 acres shall be 300 feet.

DIVISION 1.500 URBAN DISTRICTS

Section 1.501 Urban Districts

The jurisdiction is hereby divided into districts as listed in Table 1.501 and shown on the zoning map (not included in model). In combination, these districts provide for an overall urban community character. There are districts that provide for specific uses that are primarily employment areas. There are also overlay districts that address unique situations in the jurisdiction that have geographic locations where the overlay is better suited than a zoning district. The character of the districts is controlled open space and intensity (Article 3).

Section 1.502 Suburban (S) District

The purpose of the S district is to provide for new development in a portion of the community having a suburban character:

- A. Land Uses. The purpose is to provide for new residential development. Open space is required to insure there is sufficient borrowed space to retain a suburban character.
- B. Economy. The district provides for residential living with work and shopping in more urban parts of the jurisdiction.
- C. Utilities. Public sewer and water services are to be provided.

Table 1.501 Urban Zoning Districts		
Character Class	Character	Prior Code Districts
Character Districts		
Sub-Urban	Suburban (S)	R-1
Urban	Auto-Urban (AU)	R-2, R-3, R-4, C-1, O-1
	Urban (U)	R-5, R-7, C-2, O-2
	Urban Mid-Rise (UM)	R-8, B-1
	Urban Core (UC)	B-2
	Redevelopment (RD)	Where redevelopment is desired
Use Districts		
	Neighborhood Conservation (NC)	District preserves areas that would be nonconforming
	Business Park (BP)	I
	Industry (I)	I
	Heavy Industry (HI)	HI
	Port (P)	
	College (C)	
Overlay Districts		
	Historic Overlay (HO)	R-2, R-3
	Redevelopment Overlay (RDO)	NC ₅ , AU
	Arterial Expansion Overlay (AEO)	R-4
	Marina Overlay (MAO)	R-5
	Entertainment Overlay (EO)	CBD, B-1, B-2
	Historic Building Overlay (HBO)	any
	Tall Building Overlay (TBO)	B-2

Section 1.503 Auto-Urban (AU) District

This district provides for moderate-density development that has an auto-urban character dictated by reliance on surface parking and low open space ratios (OSR). Surface parking makes urban enclosure impossible, dictating the auto-urban character. [Note] It is strongly recommended that the uses of this district be limited, as was done in the Sub-urban districts (Division 1.400), to increase the density. [/Note]

- A. Land Uses. This district provides a full range of uses whose intensity is limited by surface parking. Design standards are intended to reduce the impact of parking on the character of the area.
- B. Economy. This district provides a place for family living and a limited range of nonresidential uses. The district can provide employment for servicing regional travelers.

- C. Parking. This district relies on surface parking with design standards to reduce its adverse visual impact.
- D. Utilities. Public sewer and water services are to be provided.

Section 1.504 Urban (U) District

This district provides an urban character with building heights, structured parking, and setbacks that provide enclosure. It is the dominant character of the jurisdiction and provides part of the overall urban character.

- A. Land Uses. All land uses are permitted in this district that maintain the urban character, with high enclosure and minimal open space. Mixed uses are encouraged.
- B. Economy. In a small jurisdiction, this may include a central business area in addition to urban residential. In a large jurisdiction, the district is mainly residential, with neighborhood and community-scale commercial and employment uses.
- C. Parking. Parking is in structures, under buildings, or subsurface.
- D. Utilities. Public sewer and water services are to be provided.
- E. Transportation. Public transit is encouraged in order to reduce parking needs.

Section 1.505 Urban Mid-Rise (UM) District

The purpose of this district is to provide a higher-density urban district where the urban character is created by tall buildings of a minimum of 15 stories. It can be used as a secondary business area in larger cities or as a regional center in very large cities.

- A. Land Uses. This district can be predominantly residential or nonresidential, depending on its economic purpose. Mixed-use buildings and commercial ground floors with other uses above are common.
- B. Economy. This district is primarily an economic center as a specialty employment area, a regional center, or high-intensity residential.
- C. Parking. Parking is in structures, under buildings, or subsurface.
- D. Utilities. Public sewer and water services are to be provided.
- E. Transportation. Public transit should serve such areas and should be a requirement in locating this district.

Section 1.506 Urban Core (UC) District

This district is the jurisdiction's central core or CB district and in the largest cities. Buildings over 40 stories create its character.

- A. Land Uses. These include all residential, commercial, and office uses. They are found primarily in mixed-use structures, where office uses are generally dominant.
- B. Economy. This is an employment and shopping center, with some internal residential areas, which serves the entire jurisdiction and region. People commute in to work or shop. It is the most important such center in the community or region.
- C. Parking. This shall be structured parking, under buildings, or subsurface. Public parking should be provided by the jurisdiction.
- D. Utilities. Public sewer and water services are to be provided.

- E. Transportation. This district should be located at a public transit hub.

Section 1.507 Neighborhood Conservation (NC) District

The NC is the largest district because nearly all the jurisdiction's land has been developed prior to the adoption of the LDO. It protects the character of existing developments or neighborhoods, each of which has a unique character. These are often based on specific use types and height.

- A. Land Uses. The purpose is to prevent existing residential development from becoming nonconforming. It is not intended to permit new subdivisions or new housing, except for preexisting vacant lots in developed areas.
- B. Economy. This district has no economic function and relies on other districts or jurisdictions for work and shopping.
- C. Utilities. Water and waste water are provided for by public systems.

Section 1.508 Business Park (BP) District

The business park is a mixed-use district that provides industrial, office, and service employment. It seeks to maintain the character of an urban streetscape, but parking and loading make it auto-urban.

- A. Land Use. Office, industrial, warehousing, and wholesale businesses predominantly conducted inside buildings are the district's primary uses. Supporting restaurants and lodging facilities are permitted uses.
- B. Economy. This district provides for a substantial range of employment.
- C. Surface parking and loading are necessary for industrial or warehousing. Office and some other uses should have structured parking in order to limit its auto-urban character.
- D. Utilities. Public water and sewer service are required, and pretreatment of sewerage may be required.

Section 1.509 Industry (I) District

The I district has an urban character based on multistory buildings with little open space but is landscaped to conceal the character of the utilitarian buildings.

- A. Land Use. The predominant land uses are industrial and warehousing, with many uses permitted to have substantial outdoor storage.
- B. Economy. This district provides for more intensive industrial employment that may have heavy transport requirements in need of rail or air shipping in addition to trucks.
- C. Parking. This use requires structured parking.
- D. Utilities. Full public water and sewer service are required, and plants will have to pretreat sewerage to jurisdiction standards.

Section 1.510 Heavy Industry (HI) District

The HI district includes industrial uses which are noisy, smelly, unattractive, and have lots of exterior storage, and where the processing is exposed rather than concealed inside enclosed buildings. It should have rail and road access. Marine access is important in some areas.

- A. Land Use. Heavy industrial uses.
- B. Economy. Provides employment in heavy industrial jobs.

- C. Utilities. Full public water and sewer service with pretreatment of wastes are required.

Section 1.511 Port (P)

Ports require access to navigable water, rail, and highways. This unique combination of transportation resources needs to be protected from other development to preserve the area for growth and expansion of port facilities.

- A. Land Use. A full range of industrial and warehousing adjoining loading and off-loading facilities for shipping.
- B. Economy. This is a regional or national facility for the importation and export of goods.
- C. Utilities. Full public water and sewer facilities are required.

Section 1.512 College and University (C)

Colleges and universities are unique institutions and, in urban character districts, often include larger buildings. There may be larger green spaces than in other urban areas. The following rules apply.

- A. Land Use. Land uses permitted are university buildings, dormitories, open space, and parking. Private housing associated with the university may be permitted where the university or college master plan indicates it.
- B. Economy. This district provides for higher education and is important to the jurisdiction in attracting other economic activity that benefits from the educational institution's resources.
- C. Parking. Parking shall be structured parking, under buildings, or subsurface.
- D. Utilities. Public water and sewer services are required.

Section 1.513 Overlay Districts

These are overlaid on a base district but have additional regulations that may be more or less strict than the underlying district standards. The following overlay districts are provided.

- A. Historic Overlay (HO) District. The HO district consists of portions of NC₂₀ and NC₁₅ districts shown on the jurisdiction's zoning map. This area consists of single-family Queen Anne's and Stick Victorian homes, most built between 1860 and 1900, although some were built as late as 1922.

{Sidebar}

In using this district, a detailed design section that specifies the styles and any standards for the exterior color of the building and building elements is required. Where there will be nonconforming buildings in the district, the community will face a choice between providing regulations for them to become conforming or leaving them nonconforming.

{/Sidebar}

- B. Redevelopment Overlay (RDO) District

{Note}

There may be a need for more than one of these districts to serve a variety of redevelopment purposes: residential, mixed-use, or commercial. They may have different intensities as well.

{/Note}

This district is intended to provide for the redevelopment of an area 250 feet deep along Walnut Street between 2100 and 2800, where the desire is to encourage redevelopment of a deteriorated commercial strip to an urban character.

1. Land Uses. The purpose is to encourage the replacement of existing deteriorated commercial development and vacant properties to provide housing and supporting residential uses and enhance the quality of development. It provides an increased intensity to furnish an incentive for redevelopment.
 2. Economy. This district encourages some commercial uses to serve the immediate area, and some through traffic if the district has arterial frontage.
 3. Parking. Parking shall be structured parking, below buildings, or subsurface.
 4. Utilities. Water and waste water services have already been provided for, either on-lot or by public systems.
- C. Arterial Expansion Overlay (AEO) District. Land along Green Bay Avenue currently zoned AU for 150 feet on either side of the street is too narrow to permit redevelopment of currently viable commercial uses. This overlay covers land zoned AU or U adjoining the corridor 500 feet from the centerline of Green Bay Avenue. Redevelopment of these and adjoining properties is permitted to build to U intensities, provided the following conditions shall be met.
1. The property is contiguous to the existing AU or U districts.
 2. The landowner has acquired the entire block, half-block to the alleyway, or three acres in area with a minimum width of 300 feet.
 3. Uses permitted in the U district are permitted in the overlay.
 4. Where land adjoining the expansion is in residential use, the landowner shall provide a bufferyard meeting the standards of Article 8. The width shall be 20 feet, with a six-foot wall required abutting the commercial uses. The landscaping should be such that the area serves as a park for the neighborhood with at least one bench every 100 feet. It shall be offered as a park to the jurisdiction or to any homeowners' association.
- D. Marina Overlay (MAO) District. This district requires the presence of an existing marina. Its purpose is to maintain waterfront access for marine recreation and boat storage that could be lost to waterfront residential that can outbid for the use of the land. The following rules apply.
1. An existing marina with docks and boat storage is present.
 2. The use must continue to provide 90 percent of current surface land storage of sailboats or 100 percent of surface storage of other boats.
 3. All dockage and fueling facilities must be maintained. If dockage is for new residential uses, that shall require expanding facilities so that there is no loss to the current users.
 4. Any existing restaurants, locker rooms, or other facilities for boaters must be maintained.
 5. Existing launching ramps and maneuver space shall be maintained or improved.
 6. Residential use is permitted provided rules 2 through 5 above are met.
 7. The residential structure, if located on the shore, shall provide a 15-foot-wide waterfront pedestrian precinct open to the public and provide access to any docks.
 8. No other uses permitted in the underlying districts shall be permitted to displace marina uses or be built on the properties' vacant land.
- E. Entertainment Overlay (EO) District. This district overlays other districts where the intent is to create an entertainment area. It is intended to create an active and festive area. The following standards apply.

1. Uses such as theaters, event centers, restaurants, night clubs, or other entertainment uses shall be encouraged. No new residential, office, or other uses permitted in the underlying district shall be permitted unless they contain new entertainment uses on the lower floors.
 2. Signs may be up to 80 percent larger than otherwise permitted in the district. Lighted and electronic signs with changing messages are also permitted. All are larger and brighter signs than permitted in the underlying district.
 3. Lighting of buildings and pedestrian areas is permitted to exceed the underlying district standards by 50 percent.
- F. Historic Building Overlay (HBO) District. This is a district containing individual historic structures. Its intent is to preserve the buildings' style, aesthetics, and historic character when the maximum intensities in the district are at least twice that of the historic structures. There is intense pressure to destroy and replace or substantially modify the existing buildings. The following rules apply.
1. Any difference in scale between existing structures and what is permitted in the underlying district shall be converted to development rights. This shall be expressed as a floor area ratio.
 2. Historic buildings include the Guild Hall, Second Street Bank, and Shipyard Hotel. Any exterior renovations shall be reviewed and approved by the historic commission as consistent with the character of the original building.
 3. Landowners may sell their development rights to other landowners in the surrounding HBO.
 4. New construction involving buildings that are not designated as historic or on vacant land within the overlay district shall be eligible for an increased intensity of 10 percent with the purchase of TDRs.
- G. Tall Building Overlay (TBO) District. This district allows larger-scale redevelopment to increase maximum building height and total floor area, thereby increasing the capacity of the district. It allows a large-scale developer to average the site's height and floor area to create a more interesting mix of building heights. Intensity is permitted to increase 15 percent and height by 20 percent. All plans must be approved by the pattern book process.

DIVISION 1.600 ZONING MAP

This division addresses the zoning map, its interpretation, provisions for land in multiple districts, and annexation.

Section 1.601 Zoning Map

The zoning map divides the entire jurisdiction into districts. The boundaries are shown, and each district has a letter designation corresponding to those in Divisions 1.200, 1.300, or 1.400 of this code. The zoning map is updated the working day following an amendment, as in this electronic code ([enCodePlus](#)). Maps included with or separate from the LDO, on paper or in online codified codes, may not be updated, and one should call planning staff or visit the planning office to see if there are new amendments.

Section 1.602 Interpretation

When interpreting the zoning map in order to determine the exact location of the boundary, the following rules shall apply.

- A. Roads. Boundaries shown on roads or railroads shall be interpreted to follow the centerline of the road or centerline of the rail right-of-way. Any place where a boundary follows the outer edge of a right-of-way shall be noted on the map.
- B. Property or section lines. Where boundaries follow property lines, section lines, or quarter-section lines, they shall be considered to be on those lines.
- C. Rivers or streams. Boundaries shown as following streams or rivers are interpreted as following the centerline of the stream. Where rivers or streams frequently change course, the zoning map shall display the boundary with lines, bearings, and distances so that the zoning boundary is fixed.
- D. Other locations. Where a zoning line is shown as parallel to a road or other line, it shall contain a dimension line indicating its distance from that line. In other situations where the line is not parallel to another line it shall have two dimensions, one at either end, and a bearing and distance so a survey can indicate its exact location on a property.

Section 1.603 Annexed Land

Any land annexed shall be zoned in accordance with the current zoning map, except as follows.

- A. Pre-annexation agreement. Where a pre-annexation agreement has been adopted by the board, the annexed property shall be as designated in that agreement.
- B. Unmapped land. Where annexed land is not shown on the map, it shall be placed in the lowest-density rural or residential district in the LDO.

Section 1.604 Disconnected Land

Where land returns to the county as the result of a disconnection, the following shall apply.

- A. Single Zone. Where all surrounding zoning is in a single zoning district, the disconnected parcel shall be zoned to that category.
- B. Multiple Zones. If there are multiple zones surrounding the disconnected parcel, the planning commission shall hold a hearing and recommend the zoning. The board shall then designate the zoning. Until the board acts, the zoning shall conform to the lowest intensity in the jurisdiction.

Section 1.605 Land in Multiple Zoning Districts

When a parcel of land is in two or more zoning districts, the capacity of the parcel is the sum of individual site-capacity calculations. The development plan shall conform to the zoning. A developer may submit a pattern book application which, if approved, would permit a development that does not precisely follow the zoning boundary line, as follows.

- A. Intensity. The overall intensity of use shall not be changed.
- B. Open Space. The resource protection open space in each district shall not be reduced. Bufferyards shall not be altered on boundaries, but other open space may be moved.
- C. Plan: The plan shall demonstrate to the planning commission's satisfaction that the plan works better for the development and does not represent a diminution of protection or character for neighbors. No change shall occur within 300 feet of a boundary.

- D. Approval. The pattern book approval shall be considered as being consistent with the zoning.
- E. Retail. Retail and other commercial uses shall conform to the district if within 400 feet of adjoining land.
- F. Employment. Office or industrial uses shall conform to the district intensity if within 300 feet of adjoining land.

ARTICLE 2 LAND USE

{Sidebar}

Structure of Land Use Article

There are three community character classes (rural, sub-urban, and urban) shown in the columns in the table below. The uses are different for each, so this article is broken into four parts. The first part contains common sections that apply to all three character class sections. Each of the three character classes has sections that contain land use tables and limited and conditional use standards. This is intended to allow the reader to focus on the community character types appropriate to their jurisdiction. The table below shows the districts in each class, with community character districts and use district in white , neighborhood conservation and optional districts are in grey.

The space for use tables is limited, so the number of districts has been limited to six in the tables pertaining to the rural character class, and eight in each of the tables pertaining to the sub-urban and urban character classes, as indicated in Table 2.001. Optional districts will not be found in the use tables of each character class.

{/Sidebar}

Table 2.001 District Contents by Character Classes			
	Rural Districts	Sub-Urban Districts	Urban Districts
Core Character Districts	Natural (N)	Countryside (CS)	Suburban (S)
	Agriculture (AG)	Estate (E)	Auto-Urban (AU)
	Countryside (CS)	Suburban (S)	Urban (U)
	Unincorporated Place (UP)	Auto-Urban (AU)	Urban Mid-Rise (UM)
		Urban (U)	Urban Core (UC)
Protect existing subdivisions	Neighborhood Conservation (NC)		
Use Districts in Tables	Mining (M)	Business Park (BP)	Redevelopment (RD)
		Industry (I)	Industry (I)
Optional Districts not shown in Tables	Wilderness (W)	Holding Zone (HZ)	Heavy Industry (HI)
	Interstate Commercial (IC)	Central Business (CB)	Port (P)
	Rural Industry (RI)		Marina (MA)

{Sidebar}

Using Land Use

The core districts are community character-based, designed to create communities with residential and nonresidential uses. Each class has limited overlap with the other character classes. Most rural communities are counties or townships. Metropolitan counties will generally have a mix of districts, from rural to urban. The rural category has four rural districts Natural (N), Agriculture (A), Countryside (CS), and Unincorporated Places (UP) that provide a rural character. There are two main sub-urban districts: Estate (E) and Suburban (S). Three of the four main urban districts, Urban (U), Urban Mid-Rise (UM) and Urban Core (C), provide high-intensity communities, creating enclosed space. The fourth, Auto-Urban (AU), has an auto-urban character where parking occupies more of the site than the building. Most jurisdictions have a mix of character types, as shown in the Urban and Sub-Urban columns of Table 2.001. Neighborhoods should have a single character type. If the jurisdiction wants to retain an overall

jurisdiction-wide character, the mix of districts must be carefully monitored to retain the desired character. This should be tracked using the community character triangles from Lane H. Kendig, with Bret C. Keast, Community Character: Principles for Design and Planning (Washington, DC: Island Press, 2010).

All the character classes provide for Neighborhood Conservation (NC) districts that are used to preserve the zoning under which subdivisions were built, to avoid nonconforming lots and buildings. The districts shown in Table 2.001 are the uses shown in the three sets of use tables. Because table space is limited, optional districts shown above are not included in the tables that follow. In general, these are use districts with no residential and an auto-urban character, so the number of permitted uses is narrow compared to the character districts, and residential is not permitted. The wilderness would have uses similar to the natural district.

*Division 2.100 and Sections 2.201–2.205 of Division 2.200 apply to all three character types, explaining terms used in the tables. Use tables (2.205A–C), accessory uses (Section 2.206), prohibited uses (Section 2.207), limited uses (Division 2.300), and conditional uses (Division 2.400) are represented three times, one for each of the community character classes. A suffix is utilized (**R** for Rural, **S** for Sub-urban, **U** for Urban) to facilitate searches within each class.*

{/Sidebar}

DIVISION 2.100 PURPOSE

Section 2.101 Purpose

The purpose of this article is to regulate the use of land and forms of development by zoning district. The jurisdiction is divided into community character and use districts. The purposes of the districts are listed in Divisions 1.300, 1.400, and 1.500, and summarized below.

- A. Rural Character. To provide protection for the rural community character, rural economy, and to ensure public health, safety, and welfare are protected.
- B. Sub-Urban Character. To provide protection for the suburban or estate community character, suburban or small-town economy, and to ensure public health, safety, and welfare.
- C. Urban Character. To provide an urban character. The uses should promote regional employment and protect public health, safety, and welfare.

DIVISION 2.200 LAND USE

Section 2.201 Purpose

The land use division sets forth in table form (Tables 2.205A–C) whether uses are permitted, limited, conditional, or prohibited. Conditional uses must follow approval procedure (Section 16.402) to be permitted.

Section 2.202 Land Use Permission

Table 2.204 distinguishes between permitted uses, limited uses, conditional uses, and prohibited uses. All uses must meet the standards of this code. The terms and abbreviations used in Tables 2.205A–C are as follows.

- A. Permitted Uses (**P**). A permitted use provided it meets all ordinance standards for the district.

- B. Limited Use (**L**). An administratively permitted use that differs from the permitted use (A above) because there are standards for design, buffering, location, site area, form, or other standards that determine whether the use can be approved on a specific site. These standards may not permit a use to be built on all sites in a district. There are two additional subsets of the limited use:
 - 1. **LS** indicates a limited use where spacing and scale may impose locational limitation based on the scale of the use as set forth in Division 2.300.
 - 2. **LT** indicates a limited use that is permitted in the NC district only when it was in existence on the date of ordinance adoption or other date and meets the specific limited use standards. The standards for the specific use are in Division 2.300.
- C. Conditional Use (**C**). A conditional use is one which may be permitted in the district. Its approval shall follow the procedure of Section 16.402 and meet the general criteria of that section. In addition, it shall meet the individual conditional use standards in Division 2.400.
- D. Pattern Book (**LPB**). This is a form of limited use that also requires the submission and approval of a pattern book that governs the layout and design of a development and binds the developer to follow the approved pattern book.
- E. Redevelopment (**RD**). This is for large-scale developments that involve redevelopment. They apply only to areas that consist of at least four whole blocks and parts of other blocks. The jurisdiction needs to evaluate the development and insure flexibility while protecting the surrounding neighborhood and overall traffic patterns. This use requires pattern book approval.
- F. Prohibited Use (**N**). A prohibited use is one that is not permitted in that district.

Section 2.203 Development Forms

Development forms indicate the design approach and the degree to which mixed uses are permitted. Scale or size of the land holding is also included in the criteria listed below.

- A. Single-family. Single-family developments have a maximum density that is determined primarily by lot size and width. No provision is made for open space other than that required for storm water and recreation dedications. Any open space increase causes a loss of density.
- B. Cluster. The cluster form of development is regulated by a minimum open space and a maximum density. All housing types other than mid- or high-rise are permitted in all districts. The developer is permitted to select those needed to meet site constraints, including open space requirements, and market desires.
- C. Mixed Use. These are buildings with a vertical mix of land uses, including residential.
- D. Hamlet. This is a small rural community with very limited nonresidential uses. Article 11 contains detailed design standards.
- E. Village. This is a moderately sized rural community that provides neighborhood and some community-scale nonresidential uses. Article 11 contains detailed design standards.
- F. Rural Subdivision. This use permits interim development with fewer development improvements and is controlled by Section 11.208.

Section 2.204 Location and Scale Regulations

Uses listed as **LS** in Tables 2.205A–C shall be permitted only at specific locations, based on the scale or size of the uses. Three scales, neighborhood, community, and regional, are used, and two functional types, highway service and park-type developments for office and industrial uses as shown in Table 2.204. The following are the controls.

- A. Purpose. In column 2, the purpose of the district is described by the type or size of population served by the scale types.
- B. Uses. A general indication of the anchor stores that are the largest use serving that population size is provided in column 3.
- C. Size. The limitation on the maximum size of individual uses is provided in column 4. Two figures are provided: a maximum building size for individual use and a maximum for the anchor stores listed below.
 - 1. Highway service anchors are restaurants, neighborhood marts, and commercial lodging.
 - 2. Neighborhood anchors are drugstores or small food stores.
 - 3. Community anchors are supermarkets, small discount stores, and building supply stores.
 - 4. Regional anchors are discount stores, large supermarkets, department stores, or large specialty stores.

{Sidebar}

This section provides two location options. The first requires nonresidential uses to be on major roads. The second is a growth management strategy that creates nodes having a minimum separation and maximum size. In drafting an ordinance, if only the first is desired, delete column 7.

{/Sidebar}

- D. Highway Location or Node Spacing. Highway location (column 5) and minimum frontage (column 6) require that certain uses have frontage on the designated highway type or intersection. This ensures that heavy traffic generators are not built in residential areas. This allows strip development. Node spacing (column 7), along with the maximum land area that can be devoted to the nonresidential node (column 8), is an alternative approach. It should be used when strip development is undesirable.

Section 2.205 Use Table

- A. Use Table 2.205 is presented in three parts. Part A consists of agricultural, residential, and home uses. Part B consists of institutional, commercial, and recreation and amusement uses. Part C provides for industrial, special, and temporary uses. These are the primary uses of a property. Accessory uses are secondary (Section 2.206).
- B. Table 2.205A Rural begins the rural standards. Sub-urban standards begin with Table 2.205A Sub-Urban. Urban standards begin with Table 2.205A Urban.

Table 2.204 Location and Scale-Limited Use Standards							
Scale	Purpose	Uses ¹	Size ²	Highway Type ³	Frontage ³	Node Spacing	Area
Highway service	Serve highway travelers	Commercial lodging, light auto service, and restaurants	6,000 sf except lodging @ 45,000 sf	Collector and arterial intersection or nonresidential street	Minimum 150 ft of frontage Maximum 250 ft of frontage	Minimum of 1 mile	2 ac per corner
Neighborhood	Serve a neighborhood of 1,500–5,000 people	Drugstore and personal service-type uses	5,000 sf Anchors 15,000 sf max.	Collector, arterial, or nonresidential local street	400 ft of contiguous frontage or two blocks, whichever is greater	1 per neighborhood	5 ac, 2 per intersection provided in different neighborhoods
Community	Provide service for a full community 5,000–20,000 people	Supermarket, hardware, auto supplies, retail, and services	20,000 sf Anchors 80,000 sf	Collector, arterial or nonresidential local street	800 ft of contiguous frontage on one road	Minimum of 2 miles	20 ac, 1 per intersection
Regional	Serve regional needs for more than 40,000 people	Regional centers, big box, category killers, and building supplies	80,000 sf Anchors over 120,000 sf	Arterial intersections	1,320 ft of contiguous frontage on one road	Minimum of 10 miles	350 ac w/ master plan may occupy all corners
Parks	Provide major employment centers	Office, industry, warehousing, and supporting uses	NA	Arterial, major collector, or nonresidential local street	600 feet	Contiguous to commercial unless frontage is more than 1,320 ft	20 ac
¹ A specifically permitted use in Table 2.204 is permitted even if not listed in the column. ² Uses may have specific size restraints that are less than in this column. ³ The access control standards may force access from local streets, reverse frontage, or parallel access roads to provide the access.							

RURAL CHARACTER DISTRICTS

Tables 2.205A–C Rural, Sections 2.206R and 2.207R, and Divisions 2.300 - Rural and 2.400 - Rural

RURAL DISTRICTS TABLE 2.205A RURAL AGRICULTURE, RESIDENTIAL, AND HOME USES												
Use	Zoning Districts / Section References											
	N		AG		CS		UP		M		NC	
Agriculture Uses (2.302R)												
Agriculture	P		P		P		P		P		N	
Clearing	L	A	L	A	L	A	L	A	L	A	L	A
Farmstead	P		P		P		N		N		N	
Forestry	L	B	L	B	L	B	L	B	L	B	N	
Intensive Agriculture	L	C	L	C	L	C	N		N		N	
Nursery	L	D	L	D	L	D	P		N		N	
Commercial Stables	P		P		P		N		N		N	
Veterinary, Kennel, Pet	L	E	L	E	L	E	L	E	L	E	N	
Residential Uses (2.303R)												
Single-Family	C	2.402R	C	2.402R	N		P		N		P	
Cluster	P		P		P		L	A	P		N	
Single-Family	P		P		P		L		N		P	
Two-Family	P		P		P		L		N		N	
Attached Single-Family	P		P		P		L		N		N	
Multifamily	P		P		P		L		N		N	
Hamlet or Village	LP	B	LP	B	LP	B	N		N		N	
Institutional Residential	N		L	C	L	C	N		N		N	
Megastructure	L	D	N		N		N		N		N	
Residential Over Commercial	L	E	L	E	L	E	L	E	N		N	
Rural Subdivision	P		P		P		N		N		N	
Group Homes	L	F	L	F	L	F	L	F	N		N	
Manufactured Home Parks	L	G	L	G	L	G	L	G	N		L	G
Small Units	L	H	L	H	L	H	N		N		N	
Home Uses (2.304R)												
Cottage Industry	L	A	L	A	L	A	L	A	L	A	N	
Home Business	L	B	L	B	L	B	L	B	L	B	N	
Home Day Care	L	C	L	C	L	C	L	C	N		N	
Home Occupation	P		P		P		P		P		P	
Live/Work	L	D	L	D	L	D	L	D	N		N	

RURAL DISTRICTS
TABLE 2.205B RURAL
INSTITUTIONAL, COMMERCIAL, AND RECREATION AND AMUSEMENT USES

Use	Zoning Districts / Section References											
	N		AG		CS		UP		M		NC	
Institutional Uses (2.305R)												
Assembly	L	A	L	A	L	A	L	A	N		N	
Institutional	L	B	L	B	L	B	L	B	N		N	
Protective Care	N		N		C	2.404R	N		C	2.404R	N	
Public Service	L	C	L	C	L	C	L	C	P		N	
Utilities, Local	L	D	L	D	L	D	P		P		N	D
Commercial Uses (2.306R)												
Bed and Breakfast	L	A	L	A	L	A	L	A	N		L	A
Billboards	L	B	L	B	L	B	L	B	L	B	L	B
Commercial Lodging	L	C	L	C	L	C	N		N		N	
Commercial Retail	L	D	L	D	L	D	L	D	N		N	
Drive-in Facilities	L	E	L	E	L	E	L	E	N		N	
Hospitals	N		N		C	2.405R	C	2.405R	N		N	
Light Auto Services	L	F	L	F	L	F	L	F	P		N	
Mixed Uses	L	G	L	G	L	G	N		N		N	
Office	L	H	L	H	L	H	L	H	N		N	
Restaurant	L	I	L	I	L	I	L	I	N		N	
Services	L	J	L	J	L	J	L	J	N		N	
Veterinary and Kennel	L	K	L	K	L	K	L	K	P		N	
Heavy Commercial Uses (2.307R)												
Heavy Retail and Service	L	A	L	A	L	A	N		L	A	N	
Vehicle Sales and Service	L	B	L	B	L	B	N		N		N	
Recreation and Amusement Uses (2.308R)												
Adult Uses	N		N		N		N		L	A	N	
Campgrounds	L	B	N		L	B	N		N		N	
Commercial Amusement, Indoor	L	C	L	C	L	C	N		N		N	
Commercial Amusement, Outdoor	N		N		L	D	N		L	D	N	
Recreation, Indoor	L	E	L	E	L	E	L	E	N		N	
Recreation, Outdoor	L	F	L	F	L	F	L	F	L		N	
Resort	C	2.406R	N		C	2.406R	N		N		N	

RURAL DISTRICTS
TABLE 2.205C RURAL
INDUSTRIAL, SPECIAL, AND TEMPORARY USES

Use	Zoning Districts / Section References											
	N	AG	CS	UP	M	NC						
Industrial Uses (2.309R)												
Disposal	N		N		C	2.407R	N		C	2.407R	N	
Extraction	N		N		N		N		C	2.408R	N	
Heavy Industry	L	A	L	A	L	A	N		L	A	N	
Light Industry	L	B	L	B	L	B	N		L	B	N	
Recycling and Salvage	N		N		N		N		L	C	N	
Regional Utilities	C	2.409R	C	2.409R	C	2.409R	N		C	2.409R	N	
Utilities	L	D	L	D	L	D	L	D	P		N	
Warehousing and Transportation	N		N		N		N		L	E	N	
Special Uses (2.310R)												
Commercial Communication Towers	L	A	L	A	L	A	L	A	L	A	N	
Heliports	L	B	L	B	L	B	L	B	L	B	N	
Parking	L	C	N		N		N		N		N	
Private Landing Strips	N		L	D	L	D	N		L	D	N	
Wind and Solar Power	L	E	L	E	L	E	N		L	E	N	
Temporary Uses (2.311R)												
Commercial Outdoor Sales Events	P		P		P		N		P		N	
Concrete/Asphalt Batch Plant	L	A	L	A	L	A	N		L	A	N	
Contractor's Office	P		P		P		N		N		N	
Farm Stand	L	B	L	B	L	B	L	B	N		N	
Garage Sales	L	C	L	C	L	C	L	C	N		L	C
Model Homes	P		P		P		P		N		N	
Public Interest Events	P		P		P		P		N		N	
Special Interest Events	L	D	L	D	L	D	L	D	N		N	

Section 2.206R Accessory Uses

These are secondary uses of a property, permitted only when the primary use is permitted in the district. The following standards apply to accessory uses.

- A. Ownership. The accessory use must be part of the business or primary use and under common ownership.
- B. Size. It shall be secondary in area to the primary use, occupying no more than 25 percent of the building.
- C. Not Permitted. Where the use is not permitted in the district, it may be permitted as an accessory use if it is traditionally or functionally associated with the primary use and does not constitute more than 10 percent of the building.
- D. Signage. There shall be no exterior signage advertising the accessory use. All signage shall be for the primary use, except that directional signs with an area of no more than two square feet may be permitted.
- E. No prohibited use (Section 2.207R) shall be permitted.

Section 2.207R Prohibited Uses

The following uses are prohibited in the jurisdiction because they are considered dangerous or because they are out of keeping with the character of the community.

- A. Radioactive waste processing is prohibited at any location except hospitals. Disposal of radioactive wastes is prohibited within the jurisdiction.
- B. Manufacture of products other than timber, agricultural products, concrete ready-mix plants associated with gravel, or sand mining.
- C. Airports. This use is not suited for rural areas and should be created by municipalities with an airport zoning district.

DIVISION 2.300 LIMITED USES - RURAL

Section 2.301R Limited Uses

Limited uses are designated by an **L**, **LS**, or **LT** in Tables 2.205A–C, and are permitted as a matter of right, provided they meet all district standards of the LDO and the specific standards of this division regarding location, development form, scale, separation, design, or other criteria specified. They are presented by use category.

Section 2.302R Agricultural Uses

The following are the limited use standards for agricultural uses.

- A. Clearing. Clearing is permitted, provided it does not result in a change to the existing site capacity. The following requirements must be met:
 - 1. Existing resources shall be mapped and measured prior to clearing. A site-capacity calculation (Division 3.200) based on its current resources shall be submitted. This shall be filed in the recorder of deeds office and planning department.
 - 2. The maximum intensity for any subsequent development is fixed by a site-capacity calculation prior to clearing.

3. In the AG and CS districts, clear-cutting is permitted. However, no clearing shall be permitted within 25 feet of any water course, property line, or in drainageways.
 4. In the N district, forestry which involves the harvesting of trees shall be governed by Section 2.302B.
 5. In the M district, clearing is permitted, provided it is only for surface mining where the required woodland protection is met and at least 35 feet of woodland shall be maintained as part of any buffer. For subsequent development, a site-capacity calculation shall be submitted as part of the end use plan.
- B. Forestry. Where a property owner wishes to harvest the trees on a property, a permit authorizing forestry shall meet the requirements of this section.
1. The mapping, site-capacity calculations, and recording in paragraph A1. above shall be done.
 2. The maximum intensity for any subsequent development is fixed by tree cover prior to the site-capacity calculation.
 3. Any harvesting of trees shall maintain a buffer as required for cluster development in the N district. The area inside the buffer line on the property shall be the maximum area allowed for forestry.
 4. Clear-cutting is permitted for up to 50 acres or 20 percent of the site, whichever is less. Harvesting all of the site shall be done in phases evenly spaced over a 20-year period.
 5. All land harvested by clear-cutting shall be reforested prior to the beginning of another harvest phase, except where the landowner may leave areas for roads and lots for future development that meets district standards. A sketch plan shall accompany any request to leave such areas clear.
- C. Intensive Agriculture. The barns, or other structures where animals or fowl are kept, and wastewater or composting facilities shall be located at least 500 feet from a zoning district boundary or existing residential development. They shall be located at least 200 feet from other property lines with other farmsteads. Such uses shall have best management practices installed for treatment and disposal of manure.
- D. Nursery. In the N district, nurseries shall be used only to grow seedlings for afforestation. In the AG and CS districts, the retail operation shall not exceed 5 percent of the total property.
- E. Veterinary, Kennel, Pet. These are divided into two categories.
1. Large Animal. In the AG or CS district, this use shall be conducted on a parcel of at least 10 acres that is accessible via a collector or arterial road. In the M district, only five acres are required. In the UP district, it may be permitted on two acres. If animals are to be pastured, one acre of pasture is required for each animal.
 2. Small Animal, Kennels, and Pet Sales. No domestic livestock shall be treated. This use shall be in hamlets or villages or in the UP district. All kennels shall be enclosed, with no outdoor pens. Pet sales and grooming services may be offered without veterinary services.

Section 2.303R Residential Uses

The following standards apply to residential uses or development forms listed as limited in Table 2.205A.

- A. Cluster. In the UP district, sewer and water must be provided or the lots shall exceed one acre.
- B. Hamlets or Villages. Hamlets and villages must conform to the design regulations in Division 11.200 and shall require a pattern book plan approval.

- C. Institutional Residential. In the CS or AG districts, the following uses are permitted.
 - 1. It must be demonstrated that there is a treatment-related need for institutionalized residents to be involved in agriculture or to have interactions with farm animals. Agreements shall be provided to ensure this access.
 - 2. Where the use exists, it is permitted and may be expanded by up to 50 percent.
- D. Megastructure. Megastructures are permitted in the N district where the landowner has at least 200 acres. See Division 11.500.
- E. Residential Over Commercial. In the N, AG, or CS district, residential over commercial use is permitted in the core of hamlets and villages. In the UP district, one dwelling unit may be permitted above a commercial use.
- F. Group Homes. In the N, AG, or CS districts, group homes shall be permitted in hamlets and villages. One group home shall be permitted where there are between 250 and 1,000 dwelling units and two where there are more than 1,000. They shall not be permitted except in the hamlet or village. In the UP district, one group home is permitted only if its population is greater than 4,000 persons.
- G. Manufactured Home Parks. These are permitted as follows:
 - 1. In the N, AG, CS, or UP districts, these are permitted only where the park is intended to provide housing for agricultural, forestry, or conservation workers, meeting the standards of Section 6.306. They are prohibited in hamlets or villages. On-site sewerage requires minimum one-acre lots meeting the standards of 45,000 lots in Table 4.202. Where public sewer and water are provided, lots may be reduced to those that meet the standard for 6,000-square-foot lots in Table 4.202.
 - 2. In the NC district, they are permitted only in areas mapped as NC_{MH}.
 - 3. Where intended for workers in oil or gas exploration and production they should be housed in municipalities. It may be approved as a conditional use (Section 2.403).
- H. Small Units. Small units shall be permitted in hamlets or villages only if they constitute no more than 5 percent of the total dwelling units and a market study shows a need for one- or two-person households.

Section 2.304R Home Uses

Home uses designated as **L** shall be permitted pursuant to the following regulations.

- A. Cottage Industry. This is permitted in the N, AG, CS, M, or UP districts as follows:
 - 1. On farmsteads in the AG and CS where the owner is living on the farmstead, this is limited to agricultural food processing of locally grown products, construction serving rural areas such as well drilling, and septic tanks construction and installation, or building trades.
 - 2. In the N district, cottage industry may be permitted on parcels over 80 acres with an existing home, where it is based on forest and natural area resources, as in the case of river guiding or outfitters, or the manufacture of wood products.
 - 3. In the UP district, any such uses existing on the date of adoption of this ordinance shall be permitted as limited uses.
 - 4. In the M district, such uses are permitted where there is an existing residential unit.
- B. Home Business. This is permitted in any single-family dwelling on a lot of at least 10,000 square feet in area.

- C. Home Day Care. The provider of home day care shall reside on a property that is a farmstead in the AG and CS districts or in a hamlet or village, on a lot of at least 10,000 square feet. In the N district, home day care is permitted on parcels with 40 acres and an existing home. One acre is required in the UP district. In all districts, such uses shall meet the following standards.
 - 1. License. The owner shall have applicable state and local licenses.
 - 2. An outdoor play area of 100 square feet per child shall be provided and enclosed with a four-foot fence.
 - 3. A maximum of eight children, or 10 including the owner's children, shall be permitted.
 - 4. Fire safety. The building shall meet fire requirements for day care.
 - 5. Parking. In the N, AG, and CS districts, parking for four cars shall be provided. In the UP, hamlets or villages, two street parking spaces may be assigned for pickup.
- D. Live/Work. There shall be a ground-floor work/sales area which opens to the street or courtyard. The work is limited to professional offices, arts or crafts, barber, or beauty shops. It shall be permitted in the following additional situations.
 - 1. Only family members may be employed.
 - 2. Live/work is permitted in hamlet and village centers (Division 11.200) in the N, AG, and CS districts.
 - 3. Live/work is permitted in the UP district on arterial or collector roads.
 - 4. Live/ work is permitted on farmsteads in the AG or CS districts.

Section 2.305R Institutional Use

Limited institutional uses are regulated as follows.

- A. Assembly. Assembly uses are regulated by scale as follows.
 - 1. Small-scale. In the N, AG, CS, and UP districts, assembly uses with a maximum size of 6,000 square feet are permitted in hamlets and villages. They may also be permitted on paved roads, except cul-de-sacs.
 - 2. Medium-scale. In the N, AG, and CS districts, uses of less than 15,000 square feet are permitted in village areas designated for commercial or institutional uses. In all other areas, they shall be on collector roads within one mile of a municipality.
 - 3. Large-scale. Uses of more than 15,000 square feet shall not be permitted, unless they are located in state or national parks.
- B. Institutional. Institutional uses are regulated by scale as follows.
 - 1. Small-scale. Assembly uses of 10,000 square feet or less are permitted in hamlet and village centers in the N, AG, CS districts. They are also permitted in the UP district.
 - 2. Medium-scale. Uses of less than 24,000 square feet are permitted in villages centers in the N, AG, and CS district.
 - 3. Large-scale. Uses of more than 24,000 square feet shall not permitted, unless they are located in state or national parks.
- C. Public Service. These shall be located where needed to provide police, fire, library, or post office services for the jurisdiction and shall be located on collector or higher-level roads.
- D. Local Utilities. Local utilities that serve a development, hamlet or village are permitted. Utilities that serve the rural population of the district or jurisdiction are permitted. Where more than 60 percent of

the population served is in municipalities or other jurisdictions, they are not permitted except where there is a physical constraint that prohibits a location within other jurisdictions; for example, access to a river.

Section 2.306R Commercial Uses

All commercial uses (Table 2.205B) except heavy retail and service, hospitals, and vehicle sales and service shall be permitted in hamlet and village centers in the N, AG, and CS districts. Unless further specified below, only the above general requirement applies. The following are additional standards that apply to specific uses and, in some cases, uses in the UP or IC districts.

- A. Bed and Breakfast. These are also permitted on farmsteads in the N, AG, CS, and UP districts. The standards below apply to all, regardless of location.
 1. Bed and breakfasts shall be converted single-family homes with three to five guest bedrooms, containing at least 3,000 square feet.
 2. The owners shall live in the unit and prepare breakfasts for the guests.
 3. Parking shall be provided on-lot for residents and guests except in hamlets or villages, where up to one space per 40 feet of street frontage may be counted toward the needed parking.
- B. Billboards are permitted if they meet the following criteria.
 1. In all districts, they shall meet the standards of Table 2.306B.
 2. In the N, AG, and CS districts, they shall be permitted only where they do not break the plane of the horizon as viewed from the road. This ensures the rural and scenic character of these districts is preserved. The horizon limitation applies to the entire length of the roads from which they are visible. They shall be prohibited on any stretch of these roads that is designated as scenic.

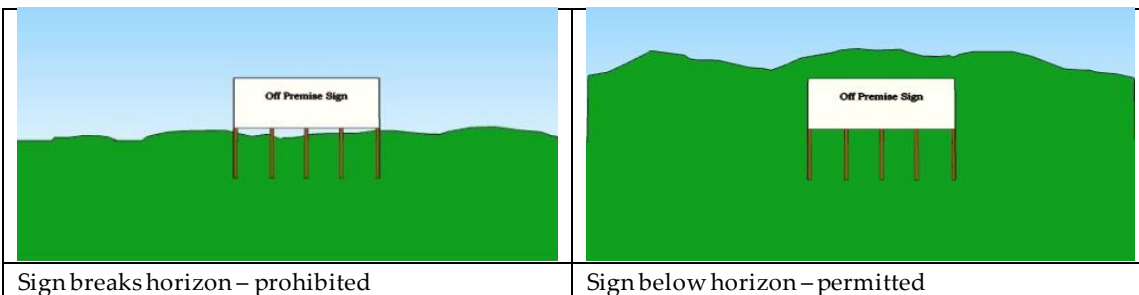


Figure 2.306B Sign breaks the horizon line

3. The spacing requirements are contained in Table 2.306B. Spacing requirements may involve land in two or more districts. The sign shall be the minimum distance from any existing billboard. Where more than one district is involved, the spacing is calculated proportionally. The calculation starts at the district with the existing sign. The remainder of the distance must be achieved within the district of the proposed sign. The remaining percent is applied to other districts.

[Sidebar]

Example: *In the N district, spacing is 12 miles; if it is 6 miles from the existing sign to the district border, 50 percent of the spacing is achieved. In the CS district, spacing is 6 miles, so 50 percent is 3 miles. Thus, the proposed sign must be at least 9 miles away from the existing sign.*

[/Sidebar] All examples should be in italic and Nirmala UI font

Table 2.306B Rural Rural Billboard Regulations					
District	Maximum		Minimum		
	Size (sf)	Height (ft)	Lot Frontage (ft)	Setback (ft)	Spacing *
N	250	24	300	100	12 miles
AG	360	24	300	100	8 miles
CS	360	24	250	200	6 miles
M	600	30	400	200	1 per district
*Where spacing involves more than one district, it shall be applied proportionately.					

- C. Commercial Lodging. In addition to hamlets and villages, this use is permitted in the IC district. In the UP district, it is permitted only on state highways 33 and 82.
- D. Commercial retail may be permitted in the UP district, provided the maximum floor area is 5,000 square feet.
- E. Drive-in Facilities. Such facilities may be permitted in the IC district or hamlet or village centers, and are subject to the following conditions
1. Access. Where such uses front on an arterial or collector road, shared access shall be provided to adjoining properties.
 2. Ordering Station. The ordering station shall be screened by a wall or berm, or under a roof where adjoining uses are residential.
 3. Take-out Windows. These shall not face the adjoining public road but shall be located to the side in order to leave the street façade free of automobile traffic.
 4. Stacking. The use shall provide stacking for 12 vehicles unless parking and use data are submitted, gathered on three similarly sized facilities on roads with similar traffic volumes, indicating that less stacking is required. The jurisdiction may require a parking and service study if it believes more than 12 stacking spaces may be required.
 5. Buffering. A 0.8 opacity bufferyard shall be installed where the adjoining land is not in the hamlet or village center.
- F. Light Auto Services. In addition to hamlets and villages, this use is permitted in the IC district. In the UP district, it shall be limited to 5,000 square feet. It shall meet the following standards to reduce its impact on neighbors and the public.
1. Bay doors should be in side yards except where facing residential development, where a 1.0 opacity bufferyard is required. Rear-facing bay doors are permitted where not facing residential development. Where it is demonstrated that doors must face the street, a 0.5 opacity bufferyard is required to provide visual screening.
 2. Except in the IC district, doors shall be kept closed unless vehicles are entering or exiting. The building shall be air-conditioned so workers are provided with a working environment that does not require outdoor air circulation.

- G. Mixed Uses. This use is permitted only in a hamlet or village center.
- H. Offices. These shall be in a hamlet or village center, except where there is an employment area in the approved plan.
- I. Restaurants. In addition to hamlets and villages, this use may also be permitted in the IC district. In the UP district, it is permitted, provided it has less than 4,000 square feet.
- J. Services. In the hamlet or village center, such uses have a maximum size of 5,000 and 8,000 square feet, respectively. In the UP district, they are permitted if they have less than 3,000 square feet.
- K. Veterinary and Kennel. Veterinary offices may be permitted on any existing parcel of 10 acres or more. General-use kennels and kennels used for breeding may be permitted on any farmstead or on existing parcels of 20 acres or more, and open pens are permitted. Both are permitted in hamlet or village centers on lots of 3,000 square feet, provided there are no outdoor pens.

Section 2.307R Heavy Commercial

- A. Heavy Retail and Service. These shall only be permitted in villages where the approved master plan provides an area for such uses. The following additional standards shall be met.
 - 1. A market study demonstrates that there is a need for such facilities that cannot be met in nearby municipal jurisdictions.
 - 2. These uses shall only be accessed from an arterial or collector street, or nonresidential local street.
 - 3. Fuel dealers shall be permitted only in the IC or M district.
- B. Vehicle Sales and Service. This shall only be permitted in villages where it can be demonstrated that:
 - 1. A market study demonstrates that there is a need for such facilities that cannot be met in municipal jurisdictions within a one-hour drive.
 - 2. The uses shall be in the employment area of the village's approved master plan.
 - 3. These uses shall only be accessed from an arterial or collector street, or nonresidential local street.

Section 2.308R Recreation and Amusement Uses

Recreation and amusement uses are permitted under the following standards, when shown as limited uses in Table 2.205B.

- A. Adult Uses.

{Sidebar}

This use is generally considered to be socially undesirable but legally must be permitted. Thus, it is a very difficult use to deal with. The primary reason for this is that zoning does not permit inquiry into an owner's history or character. Licensing permits both a far more expansive investigation and revocation of the license when problems occur. Additionally, zoning enforcement officers are far less able to deal with enforcement than police. The language of this section is based on the use being licensed. All land use and operational standards should be in the licensing ordinance. Thus, in this section, most of the control is based on exterior appearance.

{/Sidebar}

No adult use shall be permitted unless it has a license from the jurisdiction. Such uses may be permitted in the M district or within the IC district. It shall be on a site of at least five acres. It shall have a bufferyard with an opacity of 0.8 along roads and along any boundary where there is residential development within 300 feet.

- B. Campgrounds. This use shall require a parcel of at least 25 acres. Either 50 feet of woodlands or a 0.8 opacity bufferyard shall be required, to fit into the rural character. Each campsite shall have at least two trees, existing or planted. Public restrooms and showers shall be provided to meet health department standards. Table 2.204 controls use, size, access, and frontage.
- C. Commercial Amusement, Indoor. These uses shall be located only in hamlet or village centers, where the maximum size is 4,000 and 8,000 square feet, respectively.
- D. Commercial Amusement, Outdoor. These uses shall have a minimum of five acres of land and may be used in the M district as buffers to mining uses. Existing county fairgrounds shall be permitted and may be expanded by up to 25 percent.
- E. Recreation, Indoor. These uses shall be located only in hamlet or village centers where the maximum size is 6,000 and 12,000 square feet, respectively.
- F. Recreation, Outdoor. Active and passive recreational uses, picnic areas and garden plots may be permitted in the open space of hamlets, villages, or cluster developments, where they are approved with the site plan to provide recreation for residents in the N, AG, and CS districts. Outdoor recreation uses of up to 10 acres are permitted in the UP district. In the M district, outdoor recreation is permitted where it has separate access and is fenced to prevent access to other properties. Golf courses may be permitted only in the CS district, in accordance with the following requirements.
 - 1. Where approved as part of a hamlet or village in the CS district, the golf course shall not constitute more than 10 percent of the required open space.
 - 2. Golf courses may be part of resorts. See Section 2.406R.

Section 2.309R Industrial Uses

The following industrial uses indicated in Table 2.205C as limited uses shall be permitted, provided they meet the standards of this section.

- A. Heavy Industry. Heavy industries shall meet the following standards.
 - 1. In the N district, only heavy industries such as mills processing wood products shall be permitted. Fifty percent of the wood shall be harvested within the jurisdiction. The use shall have access to a road that is constructed to support projected loads. If the access road also carries tourist traffic, then a 0.8 buffer or 100 feet of woodland shall be provided.
 - 2. In the AG or CS districts, heavy industries that involve the storage or processing of food shall be permitted where the site is on a collector street or arterial highway and has rail access.
- B. Light Industry. These industries are permitted only in hamlets or villages that have an employment area in their approved plan.
 - 1. In hamlets, the industries shall ship all raw materials and finished products by parcel delivery vans and occupy less than 5,000 square feet in area.
 - 2. In villages, the maximum area is 15,000 square feet, and it must be shown that the village plan provides affordable housing for the workers.
 - 3. Access to these uses shall be from an arterial or collector street, or a nonresidential local street.
- C. Recycling and Salvage. This is permitted in the M district on a minimum of five acres of land. It shall not be permitted on land with separated mineral rights, unless there is an agreement to remove all surface materials before extracting the minerals. The following standards shall be met.

1. All such uses shall fully screen recycling or salvage material from view by utilizing a 1.0 opacity or by placing all material within buildings.
 2. Recycling of hazardous wastes shall require a conditional use permit and full environmental review.
- D. Utilities. These shall be permitted provided they meet the following standards.
1. The area cannot be served by existing utilities.
 2. At least 75 percent of the residents served reside in the adjoining N, AG, or CS districts.
- E. Warehousing and Transportation. This is permitted in the M district only, where the use has access to a state or federal arterial highway. It is also permitted in villages where there is an employment area. It must be demonstrated that there is sufficient affordable housing in the village plan for the proposed facility's workforce. Access to these uses shall be from an arterial or collector street, or nonresidential local street.

Section 2.310R Special Uses

- A. Commercial Communication Towers. All towers shall meet the following criteria.
1. Site. The site shall be large enough to accommodate the planned failure of the tower on-site, including all support elements, plus 20 feet on all sides.
 2. Failure. All towers shall have an engineering drawing(s) and other material showing the planned failure design, indicating how it is designed to fall unbroken, break at specific points under stress, or fail in an extreme event.
 3. Security Protection. The tower and support buildings shall be in a fenced enclosure of eight feet that is topped with barbed wire to prevent access. The fence shall be screened with an evergreen hedge where visible from a public road or residential development.
 4. Multiple Antennas. All towers shall be designed to support multiple antennas of different, compatible communication companies.
 5. Alternative sites. Any application for a new tower shall demonstrate a lack of coverage in the area where it is proposed. The application shall include three alternative sites within one mile of the proposed location. Data shall be provided that illustrate the difference in coverage. Any site owned by the jurisdiction shall be included where recommended by the planning director.
 6. Viewshed. A map shall be submitted showing the site, topography, tree cover, and the degree to which the site is screened from view of arterial or collector roads and existing hamlets, villages, or UP district boundaries.
 7. Decision. From the proposed and alternate sites, the planning director and engineer shall select the one that reduces the impact of the towers on residential neighbors or vistas, covers all areas currently underserved, and does not require more than 10 feet of additional height.
- B. Heliports. In the N district, these shall be permitted at forestry facilities, firefighting facilities, woodland management offices, or emergency facilities. In the AG and CS districts, they may be permitted on farmsteads for the owner's private use and at emergency facilities.
- C. Parking. Commercial or public parking uses are permitted only in hamlets, villages, or resorts serving a variety of surrounding uses.

1. Setbacks. All such uses shall provide the street setback (Table 4.402) for the district for commercial uses.
 2. At-Grade Parking. Parking buffer standards (Table 8.307) shall be met.
 3. Street Buffers. The submission shall provide for benches, kiosks, or other design elements to enhance the hamlet or village center streetscape.
 4. Structured Parking. This shall provide grade-level shops or offices to integrate the parking with the commercial uses and screen parking on upper floors in order to enhance the streetscape.
- D. Private Landing Strips. A private strip is permitted in the AG and CS districts on an individual farmstead, provided it serves only the landowner's aircraft. A private strip providing rural crop services may be established, if it serves the jurisdiction's population, is limited to five airplanes, and does not service recreational aircraft. It shall be located where there are no residential units within one-quarter mile of either end of the runway, and no hamlet or village within one mile of either end of the runway.
- F. Wind and Solar Power. Wind and solar power are highly desired to promote sustainable energy production in rural areas. Because they emit noise, wind turbine locations must be chosen that avoid creating nuisances to nearby residential uses. Solar has few problems. The following standards apply.
1. Wind Turbines. Wind turbines shall be located at least 1,320 feet from any area zoned NC. They may also be located on common open space of clusters, hamlets, or villages at least 660 feet from the dwellings. If located in open space, the use shall conform to the limitations of Section 5.212. All turbines shall be located so as to provide the spacing of turbine towers required for efficient operation.
 2. Highway Locations. In the N, AG, CS, and M districts, wind turbines are permitted within 500 feet of an interstate, freeway, expressway, or four-lane arterial right-of-way or within the right-of-way, provided:
 - a. Within the right-of-way, a length of at least one mile has been designated by the state's department of transportation as suitable for a turbine farm. At no point shall a turbine be permitted closer than two times the height of the turbine (measured to the height of a vertical blade on the turbine) to existing residential development or lots on an approved residential site plan.
 - b. Wind turbine developers may secure ownership or easements of a strip of land for a turbine farm abutting the right-of-way of the roads described above. The width of the site at each tower location shall be at least three times the height of the turbine (measured to the height of a vertical blade on the turbine) from existing residential development or from lots on an approved residential site plan.
 3. In the N district, wind turbines shall not be in scenic viewshed protection areas. All such sites shall be at least three times the height of the turbine (measured to the height of a vertical blade on the turbine) from any property line. They shall be permitted in wooded and savannah environments, provided the applicable resource protection standards are met by the tower sites and access roads.
 4. In the AG district, wind turbines shall be permitted on any farmstead, provided they are located a distance 1.25 times the height of the turbine (measured to the height of a vertical blade on the turbine) from any property line and twice that distance from the farmstead dwelling.

5. In the CS district, wind turbines may be permitted as part of a cluster development, to reduce the development's reliance on carbon-based sources of energy. The tower site shall be designated as part of the development's open space, provided it is not on protected resource land. Wind turbine location(s) shall be clearly designated on the site plan and all prospective buyers made aware of the proposed wind turbines. The turbines shall be located at least three times the height of the turbine (measured to the height of a vertical blade on the turbine) from any property line.
6. In the M district, wind turbines are permitted where they are located at least 1.25 times the height of the turbine (measured to the height of a vertical blade on the turbine) from any property line or building.
7. Individual Solar. The use of solar is strongly encouraged on any individual use. Panels are best located on roofs and shall adhere to all setbacks for the use.
8. Solar Plants. Solar facilities do not have noise problems and are permitted only when a plan shows no clearing of woodlands. They shall be at least 50 feet from any property line and have a hedge maintained at five feet or more in height located so as to screen them from adjoining uses.

Section 2.311R Temporary Uses

- A. Concrete/Asphalt Batch Plant. This shall be located with direct access to the road being repaired. It shall be located at least a half mile from any hamlet or village development or any NC or UP districts.
- B. Farm Stand. Farm stands are permitted where 60 percent of the produce sold is produced on-site. Structures shall be located at least 20 feet from the property line. They shall have 10 parking spaces per 1,000 square feet of stand area.
- C. Garage Sale. Garage sales may be permitted Friday through Sunday, up to two times a year. Temporary signs are permitted (Section 9.301). Signs are permitted off-site, provided they are erected with the landowner's permission. Garage sales shall obtain a permit from the planning department so that it may track sales. All signs must be posted no earlier than 7 a.m. on Friday and shall be removed by 3 p.m. on Sunday to reduce the length of time signs clutter the neighborhood.
- D. Special Interest Event. In the N, AG, and CS districts, these uses shall be located in a park with the jurisdiction's approval in a hamlet or village development area, or on land owned by the sponsoring institution. In the UP district, they shall be limited to the land of the organization holding the event.

DIVISION 2.400 CONDITIONAL USES - RURAL

Section 2.401R Conditional Uses

In addition to the conditional use standards (Section 16.402), no conditional use permit shall be approved unless the standards of this division are met.

Section 2.402R Single-Family

In the N and AG zones, the development of a single-family subdivision or lot is permitted only where one of the following conditions is met.

- A. A single dwelling is permitted where an existing parcel is not held in common ownership with any adjoining property, even when it exceeds maximum density. The parcel must have an approved waste disposal system. OR

- B. In the CS district, a subdivision of three lots is permitted where there are no natural resources that need to be protected. This development shall not exceed the lowest density in Figure 3.307, but no common open space would be required.

Section 2.403R Manufactured Home Parks

These are permitted in N or AG districts where housing or worker camps are needed for oil or gas workers. They should be located in municipalities where facilities and businesses are available. The following conditions shall be met.

- A. Location. The proposed site is more than 25 miles from the nearest municipality.
- B. Size. The park should provide housing for a minimum of 100 workers.
- C. Buffer. A bufferyard with an opacity of 0.5 shall be planted with evergreen plant unit types to provide wind blocks to reduce wind erosion and screen winter winds.
- D. Utilities. The developer shall provide the site with a water system and a sewer system that uses land treatment with soils that have sufficient depth to filter pollutants.
- E. Roads. They are located on a paved road that the engineer certifies will sustain the type of traffic from the site. If necessary, the developer shall provide improvements to the road to meet certification standards.
- F. Removable. As these facilities may not be needed in the long term, a special taxing district shall be established to provide a removal fund that will pay for the removal of all facilities and site restoration upon closing.

Section 2.404R Protective Care

Such facilities should be in municipalities where there are existing utilities and access to housing for workers. They may be approved conditionally in the AG or N districts when the following conditions are met.

- A. Type. They are county facilities. Although exempt from local codes, state and federal facilities shall be encouraged to meet these standards.
- B. Site. In the AG district, the site shall primarily be land that is no longer in active agriculture, with old field cover. If still in active agriculture, its soils shall not be class one or two agricultural soils.
- C. N district. The site-capacity calculation shall dictate the area to be cleared for the site, preserving the required open space.

Section 2.405R Hospitals

Hospitals require a lot of support infrastructure and housing and are best located in municipalities. A hospital may be permitted in an IC overlay district where the following conditions are met.

- A. Needs Study. It must be shown that the jurisdiction's rural population does not have access to an existing hospital within a two-hour travel time.
- B. Site. There is no municipality that could provide such a facility.
- C. Staffing. The plan shall include the provision of staff housing and housing for visitors on the site or within a cluster development adjoining the site.
- D. Sewer and Water. The developer must provide adequate sewer, water, and other utilities.

Section 2.406R Resorts

{Sidebar}

This use is only appropriate in rural areas where the county has unique physical conditions, like lakes or mountains that attract tourists for resort-type activities. It should be supported by a comprehensive plan that provides for new or enlarged resorts.

{/Sidebar}

Resorts may be permitted in the N or CS districts. The establishment shall meet the following conditions.

- A. Comprehensive Plan. The comprehensive plan shall identify a need for resorts in the community and identify a location for such a facility.
- B. Location. In the absence of a resort zoning district, a single site may be approved. This use shall only be permitted in areas of the jurisdiction where there are unique scenic, water, or topographical conditions that are suitable for resort, vacation, second-home development, or site-dependent recreation. A resort where most of the use is devoted to golf is prohibited. It does not qualify as an adequate recreational use, as it can be done on nearly any land.
- C. Size. The site shall be between one and five square miles in area. The jurisdiction may require the site to be expanded in order to offer owners of adjoining, suitably similar land inclusion in the site, so as not to create a monopoly.
- D. Uses. The following shall be provided: commercial lodging, restaurants, at least some commercial retail, service uses and outdoor recreation. Areas with residential uses may be provided for vacation, second-home, and retirement living.
- E. Market Studies. A study shall be prepared that indicates there is a market for such a use over a 20-year period. It shall provide information on the impact of the resort on the economy and the displacement of rural uses by the development. The study shall look at alternative sites and existing facilities.
- F. Impact. There shall be an impact study showing the adequacy of existing facilities, including schools and roads, to support the proposed development and employees. If public improvements are required, the proposal shall identify direct contributions as well as anticipated tax revenues to offset costs. The jurisdiction may require direct contributions to avoid short-term shortfalls of tax revenue or create a special taxing district as a condition of approval.
- G. Plan. The plan shall show an initial resort development and proposed expansion areas.
- H. Environment. All environmental protection standards shall be met.

Section 2.407R Disposal

This use shall be permitted only if the following can be shown.

- A. Need. It must be shown that there are no existing disposal facilities in the jurisdiction or region with a projected capacity for at least 10 more years.
- B. Site Conditions. The design of the site shall protect groundwater and aquifers by one of the following means.
 - 1. The site's soils and geology are of suitable impermeability, thickness, and uniformity to serve as a long-term barrier. OR
 - 2. A double liner and monitoring well system are installed to provide warning if any leachate leaks through the first liner or off-site.

- C. Leachates and Gases. A detailed analysis of the chemical composition of leachates and probable production of gases such as methane, based on similar facilities, has been submitted and approved.
- D. Monitoring Wells. One well shall be placed below the top liner to monitor for leachates. Four monitoring wells shall be placed at corners of the site, in aquifers below the site. Any results showing leakage shall be immediately reported to the health department. Annual reports are required even if there are no changes.
- E. Collection and Treatment. A detailed plan to collect leachates and gases for treatment or capture must be submitted. For methane or other hydrocarbons, the jurisdiction may require capture and reuse, rather than burning off.
- F. Hazardous Wastes. Where hazardous wastes are to be disposed of, the applicant shall submit a list of all such materials. The following additional or modified requirements shall be met.
 - 1. Additional Approval. The state environmental agency shall review and approve the design of the site, accounting for the hazardous wastes that are to be disposed of on-site.
 - 2. Liners. The liners shall be designed to resist penetration by the hazardous wastes proposed for disposal, or any likely combination of such wastes.
 - 3. Monitoring Wells. At least one monitoring well shall be installed per four acres of fill area and shall be placed below the top liner. One well shall be placed at each corner of the site and, where such wells are more than 1,000 feet apart, additional wells shall be provided.
 - 4. Treatment. Hazardous wastes shall be delivered mixed to reduce their reactive potential, or there shall be a facility on-site to reduce such potential prior to disposal.
- G. Roads. Access to a collector or arterial road shall meet the following conditions.
 - 1. The access roads shall have suitable width and construction so that traffic to the site can be carried without premature road degradation, or the applicant shall pay the jurisdiction to rebuild the road prior to opening.
 - 2. There are wheel-wash facilities and street sweepers to keep the road clear of mud or other materials tracked from the site.
 - 3. The access road's level of service is such that the opening of the facility will not degrade capacity below *Highway Capacity Manual* level of service C. The jurisdiction may require intersection improvements to better permit truck access at the developer's expense.
- H. Landscaping. The cover on disposal facilities shall be such that it is planted with trees, shrubs, and grasses similar in appearance to natural features in the region. The perimeter of the site shall have a 0.5 bufferyard.

Section 2.408R Extraction

Extraction shall occur on sites having a minimum of 100 acres in the M district. It must meet the following standards:

- A. Aquifers. Aquifers are to be protected from lower water tables and pollution.
 - 1. There shall be a map providing the location of all wells within 1,320 feet, along with data on their depth. The mapping should indicate the direction of flow within the aquifer. The applicant shall pay to have well water tested for pollution and mineral content.

2. Engineering shall indicate the cone of depression created by any pumping at the mine and demonstrate that no existing wells will be impacted, or the developer shall agree to restore and provide bonds to pay for restoring those wells.
 3. A fund must be established for water testing should there be complaints about water quality being damaged.
- B. Surface Water. Any water discharged from the site or returned to the ground shall meet state standards for fishable and swimmable waters.
- C. On-Site Water Usage. There shall be a detailed plan for water usage on-site and the source of that water. The plan shall indicate current and future use of water, based on 20-year future growth of the area. The adequacy of the water supply aquifer or municipal water shall be determined along with potential adverse impacts on existing uses dependent on the aquifer for agriculture or residential use.
- D. Processing. If mined material is to be processed on-site, a complete description of the processing, chemicals used, and wastes generated, shall be submitted. This shall include information detailing whether any of those wastes are hazardous, along with an explanation of how they will be contained to prevent them from reaching the ground or surface water or aquifers. If hazardous wastes are involved, the extraction activity shall meet the standard of paragraph E below.
- E. Containment or Removal. Where hazardous wastes are generated, the applicant shall meet the following requirements.
1. The quantity and types of hazardous materials shall be identified for yearly generation and for the lifetime of the facility.
 2. A plan for the containment, treatment, or removal of the materials shall be provided. Wherever possible, wastes shall be removed from the site after treatment.
 3. Where removal is impossible, the following shall be applied to long-term open-pit storage or tanks.
 - a. Open pits storing liquids or solids that absorb water to the point of flowing shall be designed to have a capacity to store all materials during a .002 APS storm. Diversion of drainage may be required to ensure that only the water falling on the stored materials contributes to potential overflow. There shall be a basin designed to prevent any overflow from reaching waterbodies or streams.
 - b. Tank materials and design shall provide for permanent storage and a system for inspection and leak detection. The roof or cover shall prevent infiltration of rainwater.
 - c. Liners. Liners are required to prevent aquifer contamination and, depending on the materials and soil conditions, up to three liners may be required.
 - d. Monitoring wells shall be required between any body of water and the site, and downstream of the flow of water in the aquifer.
- F. Stripped soils. These shall be stockpiled for restoration. The piles should be contoured and vegetated to prevent erosion.
- G. Overburden. Where overburden is to be stockpiled for eventual restoration, a chemical analysis shall determine if there are contaminants or pollutants that can be transported by rain or wind to surface or groundwater. A drainage and containment system shall be designed to capture, store, and treat water prior to discharging to stream.

- H. The jurisdiction shall hire, at the landowner's expense, qualified scientists and engineers to review the application and proposed cleanup solutions.
- I. Damage to Existing Uses. Potential damage to existing uses, residents or agricultural uses shall be evaluated. A means of compensation for damage shall be identified and funded.
- J. Reuse Plans. All extraction applications shall have a reuse plan. That plan shall propose a new permitted use when the facility is closed. The plan shall restore surface contours that are safe, stable, and suitable for future use, and replant the area in grasses or as permanent open space restoring the natural vegetation that was on the site.
 - 1. Where water is to remain exposed to the surface, the grading shall provide a safe approach slope for use. Otherwise, grading shall fill the area, so water surfaces are eliminated.
 - 2. Where no surface water is planned, drainage plans shall provide for new storm water flows and the installation of storm water management facilities to control the quantity and quality of the storm water runoff to predevelopment levels.
- K. Surety. All extraction shall have a surety for restoration plans and operational safety of 150 percent of the estimated costs. The surety may be required to be in the form of US government bonds or another form that provides lasting protection, should the use file for bankruptcy. A special taxing district shall be established that permits the jurisdiction to correct any failures to the storm water management or other treatment, funded by the developer.
- L. Bufferyards. Bufferyards with berms shall be required on any property line where open-pit extraction is proposed. The berm shall be sufficient to prevent views into the pit from roads or adjoining uses. The buffer shall have a minimum opacity of 0.3. If preexisting site was wooded, a 50-foot buffer of woodlands shall be preserved.
- M. Roads. The engineer shall determine that roads used by trucks involved in the operation are designed to withstand the loadings. If this is not the case, the jurisdiction shall impose a requirement that the mining operation fund the upgrading of the road to support the anticipated vehicle loading.
- N. Other Review. The jurisdiction shall not approve such facilities until they have been reviewed by applicable state agencies and water quality has been reviewed by state and federal agencies. If those are not applicable, the jurisdiction shall choose, at the developer's expense, a panel of scientists qualified to deal with the water, minerals, and chemicals involved.

Section 2.409R Regional Utilities

Regional utilities serve larger areas and urban populations and are not needed in rural areas. They may be approved as conditional uses only where there are compelling physical reasons for the location that cannot be met in municipalities or S, AU, U, or I districts, as follows.

- A. Location. The site shall meet one of the following requirements.
 - 1. Site. The site cannot be annexed to a municipality within one mile. OR
 - 2. Essential Facilities. Rail, pipeline, regional electric lines, or water supply is available only in the rural area. OR
 - 3. Fuel. The site abuts a fuel supply used by the plant.
- B. Buffering. These sites should have a buffer with an opacity of 1.0 adjacent to any street or other property line. The area in which the use occurs should be set back at least 100 feet from any property line.

C. Solar and Wind. These facilities are compatible with rural areas and are permitted (Section 2.310R).

SUB-URBAN CHARACTER DISTRICTS

Table 2.205 Sub-Urban, Sections 2.206S and 2.207S, and Divisions 2.300 Sub-Urban and 2.400 Sub-Urban

SUB-URBAN DISTRICTS TABLE 2.205A SUB-URBAN AGRICULTURE, RESIDENTIAL, AND HOME USES																
Use	Zoning Districts / Section References															
	CS		E		S		AU		U		NC		BP		I	
Agriculture Uses (2.302S)																
Agriculture	P		L	A	L	A	N		N		N		N		L	A
Clearing	L	B	L	B	L	B	L	B	L	B	L	B	L	B	L	B
Commercial Stables	L	C	L	C	N		N		N		N		N		N	
Farmstead	P		L	D	N		N		N		N		N		N	
Nursery	L	E	L	E	L	E	L	E	N		N		N		L	E
Veterinary, Kennel, Pet	L	F	L	F	L	F	L	F	N		N		N		N	
Residential Uses (2.303S)																
Single-Family	N		N		N		N		N		P		LT	A	LT	A
Cluster	P		P		P		P		P		N		N		N	
Single-Family	P		P		P		P		P		N		N		N	
Two-Family	P		P		P		P		P		L		N		N	
Attached Single-Family	P		P		P		P		P		L		N		N	
Multifamily	P		P		P		P		P		L		N		N	
Interim Subdivision	L	B	N		N	B	N		N		N		N		N	
Group Homes	L	C	L	C	L	C	L	C	L	C	N		N		N	
Institutional Residential	L	D	L	D	L	D	L	D	L	D	L	D	L	D	N	
Manufactured Home Parks	L	E	L	E	L	E	L	E	N		N		N		N	
Small Units	N		L	F	L	F	L	F	L	F	N		N		N	
Home Uses (2.304S)																
Cottage Industry	L	A	N		N		N		N		N		L	A	L	A
Home Business	L	B	L	B	L	B	L	B	L	B	N		L	B	L	B
Home Day Care	L	C	L	C	L	C	L	C	L	C	L	C	L	C	L	C
Home Occupation	P		P		P		P		P		P		L	D	L	D
Live/Work	N		N		N		L	E	L	E	N		N		N	

SUB-URBAN DISTRICTS
TABLE 2.205B SUB-URBAN
INSTITUTIONAL, COMMERCIAL, AND RECREATION AND AMUSEMENT USES

Use	Zoning Districts / Section References															
	CS		E		S		AU		U		NC		BP		I	
Institutional Uses (2.305S)																
Assembly	L	A	LS	A	LS	A	LS	A	LS	A	N		N		N	
Institutional	L	B	LS	B	LS	B	LS	B	LS	B	N		N		N	
Protective Care	N		N		L	C	L	C	L	C	N		C	C	C	C
Public Service	L	D	L	D	L	D	L	D	L	D	L	D	P		P	
Utilities, Local	L	E	L	E	L	E	L	E	L	E	N		P		P	
Commercial Uses (2.306S)																
Bed and Breakfast	L	A	L	A	L	A	L	A	L	A	L	A	N		N	
Billboards	N		N		N		L	B	N		N		L	B	L	B
Boarding and Rooming Houses	N		N		N		L	C	N		N		N		N	
Commercial Lodging	N		L	D	L	D	L	D	L	D	N		L	D	N	
Commercial Retail	N		LS	E	LS	E	LS	E	LS	E	N		L	E	L	E
Drive-in Facilities	N		L	F	L	F	L	F	L	F	N		L	f	L	F
Heavy Retail and Service	N		N		N		LS	G	LS	G	N		N		LS	G
Hospitals	N		N		N		L	H	L	H	N		N		N	
Light Auto Services	N		L	I	L	I	L	I	L	I	N		N		N	
Mixed Uses	N		N		L	J	L	J	L	J	N		N		N	
Neighborhood Mart	N		N		L	K	L	K	L	K	N		L	k	L	K
Office	N		L	L	L	L	L	L	L	L	N		L	L	L	
Restaurant	N		L	M	L	M	L	M	L	M	N		L	M	L	
Services	N		L		L	N	L	N	N		N		N		N	
Shopping Center	N		LS	O	LS	O	LS	O	LS	O	N		N		N	
Agricultural Support Services	N		N		N		N		N		N		N		P	
Vehicle Sales and Service	N		N		LS	P	LS	P	LS	P	N		N		L	P
Recreation and Amusement Uses (2.307S)																
Adult Uses	N		N		N		LS	A	N		N		N		L	A
Campgrounds	N		L	B	N		N		N		N		N		N	
Commercial Amusement, Indoor	N		LS	C	LS	C	LS	C	N		N		N		N	
Commercial Amusement, Outdoor	N		N		L	D	L	D	N		N		N		N	
Recreation, Indoor	P		P		LS	E	LS	E	P		P		p		P	
Recreation, Outdoor	L	F	L	F	L	F	L	F	L	F	N		N		N	

SUB-URBAN DISTRICTS
TABLE 2.205C SUB-URBAN
INDUSTRIAL, SPECIAL, AND TEMPORARY USES

Use	Zoning Districts / Section References															
	CS		E		S		AU		U		NC		BP		I	
Industrial Uses (2.308S)																
Extraction	L	A	L	A	L	A	L	A	N		N		L	A	L	A
Heavy Industry	N		N		N		N		N		N		N		L	B
Light Industry	N		N		L	C	L	C	N		N		L	C	P	
Recycling and Salvage	N		N		N		N		N		N		N		L	D
Regional Utilities	L	E	N		N		N		N		N		P		P	
Warehousing and Transportation	N		N		N		N		N		N		L	F	P	
Waste Disposal	N		N		N		N		N		N		N		N	
Waste Handling	N		N		N		N		N		N		N		L	G
Special Uses (2.309S)																
Airports (requires airport district)	N		N		N		N		N		N		N		N	
Commercial Communication Towers	L	A	L	A	L	A	L	A	L	A	N		L	A	L	A
Heliports	N		N		N		L	B	N		N		L	B	L	B
Parking	N		N		L	C	L	C	L	C	N		L	C	L	C
Private Landing Strips	N		L	D	N		N		N		N		N		N	
Passenger Rail or Bus Terminals	N		N		N		P		P		N		P		N	
Wind and Solar Power	L	E	L	E	L	E	L	E	L	E	N		L	E	L	E
Temporary Uses (2.310S)																
Commercial Outdoor Sales Events	N		N		L	A	L	A	N		N		N		N	
Concrete/Asphalt Batch Plant	L	B	L	B	L	B	L	B	N		L	B	L	B	L	B
Contractor’s Office	L	C	L	C	L	C	L	C	L	C	L	C	L	C	L	C
Farm Stand or Farmer’s Market	L	D	L	D	L	D	L	D	L	D	N		N		N	
Garage Sales	L	E	L	E	L	E	L	E	L	E	N		N		N	
Model Homes	L	F	L	F	L	F	L	F	L	F	N		N		N	
Public Interest Events	P		P		P		P		N		N		N		N	
Special Interest Events	L	G	L	G	L	G	L	G	L	G	N		N		N	

Section 2.206S Accessory Uses

These are secondary uses of a property, permitted only when the primary use is permitted in the district. The following standards apply to accessory uses.

- A. Ownership. The accessory use must be part of the business or primary use and under common ownership.
- B. Size. It shall be secondary in area to the primary use, occupying no more than 25 percent of the building.
- C. Not Permitted. Where the use is not permitted in the district, it may be permitted as an accessory use if it is traditionally or functionally associated with the primary use and does not constitute more than 10 percent of the building.
- D. Signage. There shall be no exterior signage advertising the accessory use. All signage shall be for the primary use, except that directional signs with an area of no more than two square feet may be permitted.
- E. No prohibited use (Section 2.207S) shall be permitted as an accessory use.

Section 2.207S Prohibited Uses

All uses indicated by an **N** in Tables 2.205A–C are prohibited in that district. The following uses are prohibited within the entire jurisdiction.

- A. Forestry.
- B. Intensive Agriculture.
- C. Toxic Materials. The manufacture of toxic materials as listed in the current version of the US Environmental Protection Agency (EPA) Title III List of Lists is prohibited.
- D. Radioactive Materials. The manufacture or processing of radioactive materials is prohibited.
- E. Hazardous Waste Disposal.

DIVISION 2.300 LIMITED USES – SUB-URBAN

Section 2.301S Limited Uses

Limited uses are designated by an **L**, **LS**, or **LT** in Tables 2.205A–C, and are permitted as a matter of right, provided they meet all district standards of the LDO and the specific standards of this division regarding development form, separation, design, or other criteria.

Section 2.302S Agricultural Uses

- A. Agriculture. Individual or community gardens are permitted in the E and S districts on all residential lots and in cluster developments. They are also permitted in the I district. The following standards apply.
 - 1. In cluster developments, food and fiber crops are permitted only as a use of common open space, provided that no area of protected natural resources is used, and the use is designated for this on the open space plan. Domestic animals may be pastured, provided there are no more than 0.5 animal units per acre and the area is managed by a qualified farmer or the operator of an equestrian facility, not the property owners.

2. I district. The greenhouses shall meet the floor area ratio (FAR) for the I district, provided that multi-floor greenhouse structures are permitted. Rooftop agriculture is permitted and shall not count as floor area. No retail space for gardening tools or supplies is permitted.
- B. Clearing. Clearing is permitted, provided that it does not result in a higher site-capacity calculation (Division 3.200) due to the cutting of trees. The following requirements must be met.
 1. Existing resources shall be mapped and measured. A site-capacity calculation (Division 3.200) based on its current resources shall be submitted. This shall be filed in the recorder of deeds office and with the planning director.
 2. The maximum intensity for any subsequent development is determined by the existing site-capacity calculation (1 above), not the land cover at the time of application.
- C. Commercial Stables. These are permitted in the Estate (E) district as a freestanding use on at least 40 acres of land. They are also permitted when associated with equestrian developments of more than 200 acres. The following standards shall be met.
 1. Pastures shall provide one acre per animal unit.
 2. Any lot larger than 60,000 square feet may keep one horse stabled on-site.
 3. Clustered equestrian developments shall provide horse trails in the site's open space.
- D. Farmstead. This use is permitted in the E district if the occupant of the home farms a property of 50 acres or more. This also applies to land that is part of a cluster development where the 50 acres are part of the development's open space.
- E. Nursery. This use is permitted in the CS, E, S, AU, and I districts. The following standards govern the amount of material that is grown under greenhouse roofs and the required road frontage.
 1. CS District. The use shall be located on arterial or collector streets. Greenhouses and buildings can cover no more than 4 percent of the site. No more than 1,000 square feet of retail space for gardening tools is permitted.
 2. E District. The use shall be located on arterial streets. Greenhouses and buildings can cover no more than 10 percent of the site. No more than 1,000 square feet of retail space for gardening tools is permitted.
 3. S District. The use shall be located on arterial streets. Greenhouses and buildings can cover no more than 15 percent of the site. No more than 2,000 square feet of retail space for gardening tools is permitted.
 4. AU District. The use shall be located on arterial streets and greenhouses and buildings can cover no more than 25 percent of the site. No more than 2,000 square feet of retail space for gardening tools is permitted.
 5. I District. Greenhouses and buildings shall all be within the setback lines, with no more than 4,000 square feet of retail space for gardening tools permitted.
- F. Veterinary, Kennel, Pet. These are divided into two categories.
 1. Large Animals. In the CS and E districts, this use shall be located on a collector or arterial road, on a parcel of at least 10 acres. If animals are to be pastured, one acre of pasture is required for each animal unit. Kennels for breeding shall have the same minimum area.

2. Small Animals, Kennels, and Pet Sales. No domestic livestock shall be treated. This is permitted in the S and AU districts on arterial or collector streets. All kennels shall be enclosed, with no outdoor pens. Pet sales and grooming services may be offered without veterinary services on-site.

Section 2.303S Residential Uses

The following standards apply to limited residential uses.

- A. Single-Family. In the BP or I district, existing single-family uses may continue as permitted uses and be converted to home uses (Section 2.304S).

- B. Interim Subdivision.

{Sidebar}

This provision is intended for use where the jurisdiction has limited utility capacity and cannot currently provide service to land planned for suburban development. It provides the property owner with limited development potential while preserving the ability to develop more intensely when utilities can be extended.

{/Sidebar}

In the S, or holding overlay district, where the comprehensive plan calls for suburban development and where utilities are not present or likely to become available for 15 or more years, interim subdivisions of one of the following types may be permitted:

1. Rural Subdivision. See Section 11.208.
 2. Ten-acre Subdivisions. This plat of 10-acre lots provides a re-subdivision plan for each lot. See Section 11.210.
 3. Interim Cluster Developments. There are interim cluster development options with septic tanks or on-site sewer. See Section 11.211.
 4. When the developer or jurisdiction extends utilities, the final subdivision may be submitted.
- C. Group Homes. These are limited to the conversion of existing single-family dwellings to housing for no more than six individuals, except for dwellings over 3,500 square feet. For those homes, a group home for 10 individuals, including live-in staff, is permitted. In the E district, they shall be at least one-half mile apart. In the S district, they shall be at least 660 feet apart. They shall be at least 400 feet apart in the AU or U districts. In the CS district, one may be permitted in cluster developments of at least 100 dwelling units.
- D. Institutional Residential. Standards for this form of residential use vary by district.
 1. CS district. This use may be permitted on farmsteads where an additional dwelling is provided for a maximum of 20 residents, and the operator demonstrates that residents will benefit from growing crops or interacting with animals. The operator shall have a license, to prohibit exploitation of residents.
 2. E District. Minimum lot size shall be 10 acres and there shall be no more than three living units per acre.
 3. S District. A minimum lot of five acres is required and there shall be no more than eight living units per acre.
 4. AU and U Districts. The minimum lot area is three acres and the maximum densities are 20 and 30 units per acre, respectively. In mixed-use buildings, institutional residential use is allowed in accordance with the maximum FAR permitted in the district.

- E. **Manufactured Home Parks.** These shall meet all standards of cluster development in the E, S, or AU districts (Article 3). Minimum lot sizes for single-wide units shall be 5,000 square feet, with a width of 50 feet. Double-wide units shall require a minimum lot size of 6,000 square feet, with a width of 60 feet. They shall be located on sites of at least 20 acres. Bufferyards with the following opacities are required: 0.8 in E, 0.65 in S, and 0.5 in AU.
- F. **Small Units.** These units shall have open space adequate to provide access and detention. In all districts, density is determined by the lot size of the small-unit type used (Section 4.302) rather than by the district standards listed in Article 3. The following standards also apply.
 - 1. Where abutting commercial development, there shall be a maximum of 24 units within a block.
 - 2. Where abutting and owned by an institutional use that provides support to the residents, such as the elderly or handicapped, there shall be a maximum of 30 units.
 - 3. Within 1,320 feet of a rail transit station, there shall be a maximum of 40 units in that area.
 - 4. Along arterial highways where there is bus service, there shall be a maximum of 30 units within 600 feet of a bus stop.

Section 2.304S Home Uses

The following standards apply to home uses that are limited.

- A. **Cottage Industry.** This is permitted on farmsteads in the CS district. It is permitted on lots with existing single-family homes in the I district. In the BP district, it is permitted in existing homes provided no trucks or other equipment are stored outside.
- B. **Home Business.** This is permitted on lots with existing single-family homes in the BP and I districts.
- C. **Home Day Care.** The provider of home day care shall reside on the property. In the CS district, it is permitted only on farmsteads. In the BP and I districts, it must be located in an existing house. All shall meet the following conditions.
 - 1. **License.** The owner shall have applicable state and local licenses.
 - 2. **An outdoor play area** of 100 square feet per child shall be provided and enclosed within a six-foot fence.
 - 3. **A maximum of 10 children**, including the owner's children, shall be permitted.
 - 4. **Fire safety.** The building shall meet fire requirements for day care.
 - 5. **Size.** This varies by character type. In the E district, the site shall have a minimum of three acres. In the S district, it shall total at least 10,000 square feet.
 - 6. **Access.** Such uses may take access from local streets, except cul-de-sacs.
 - 7. **Parking.** Such uses shall have a circular drive in the E district to permit off-street parking. In the S district, they may have assigned on-street parking with the planning director's approval, or off-street pickup from a looped drive.
- D. **Home Occupation.** This is permitted on lots with existing single-family homes in the BP and I districts.
- E. **Live/Work.** Live/work is permitted only where commercial uses are permitted in the AU or U districts. Each live/work unit shall have a ground-floor work space either in the principal structure or a detached unit fronting the street or mews. Access for parking shall be from an alley in the U district.

Section 2.305S Institutional Uses

The following are limitations on institutional uses.

- A. Assembly. Assembly uses are scale-limited based on the type of road and peak traffic generation.
 - 1. Small-scale uses of less than 4,000 square feet may have frontage on local streets, other than cul-de-sacs. Such uses shall be on a residential collector or higher-level street.
 - 2. Medium-scale uses of 4,001 to 16,000 square feet must be located on collector roads.
 - 3. Large-scale uses of more than 16,000 square feet require an arterial road. Facilities of 24,000 square feet or more shall be located on a four-lane arterial road.
- B. Institutional. Institutional uses are scale-limited based on the type of road and peak traffic generation.
 - 1. Small-scale uses of less than 5,000 square feet must have frontage on a residential collector or higher-level street.
 - 2. Medium-scale uses of 5,001 to 20,000 square feet must be located on collector or arterial roads.
 - 3. Large-scale uses of more than 20,000 square feet require frontage on an arterial road. Facilities of 35,000 square feet or more require access on four-lane arterial roads.
- C. Protective Care. This use may be located in the S, AU, U, BP, or I district, provided that the following standards are met.
 - 1. In the S, AU, or U districts, a protective care use shall be attached to a police station or courthouse. Separate internal access control shall be required for public access. Only police or emergency services may access it directly from the street.
 - 2. In the BP or I district, a protective care use may be built as a separate facility on at least one acre of land, with a bufferyard of 0.4 opacity and wire fencing that prevents access to the property.
- D. Public Service. These shall be located where needed to provide police, fire, library, or post office services for the jurisdiction, and shall be located on collector or higher-level roads.
- E. Utilities. Local. In the NC district, the utility must demonstrate that there are no sites outside the district that can provide the utility. In the E, S, or AU districts, if located in residential locations, the utility must demonstrate that it will predominantly serve that residential community

Section 2.306S Commercial Uses

- A. Bed and Breakfast. These shall be converted single-family homes of at least 2,600 square feet, with three to five guest bedrooms. No guest bedroom shall be less than 144 square feet, exclusive of bathroom. The owners shall live in the unit. Parking shall be provided on-lot for residents and guests unless the engineer determines that, based on available evening spaces on the street, on-street parking can be provided. The owners shall prepare breakfasts for the guests.
- B. Billboards. These are commercial uses where land is rented or leased to a sign company or other advertiser for income to the property owner. The property may have other uses. Billboards are limited to the area and maximum height dictated by Table 2.306B. They shall be located at least one foot behind the street setback determined by the district or use, whichever is greater. They shall be located at least 300 feet from a zoning district boundary. The area, height, spacing, and frontage requirements are contained in Table 2.306B.

Table 2.306B Sub-Urban Sub-Urban Billboard Standards				
District	Maximum		Minimum	
	Size	Height	Lot Frontage	Spacing
AU	450	30	400	800
BP	600	30	500*	800
I	600	35	500*	600
*In business or industrial parks, the developer may plan for billboards, so the frontage only applies to the development frontage.				

- C. Boarding and Rooming Houses. This use is permitted in the AU district where the parcel is within 400 feet of an arterial or collector road and meets the following requirements.
1. It has a maximum of 20 rooms of 144 square feet each plus its own bathroom.
 2. It is on a lot with a minimum of 12,000 square feet.
 3. It has off-street parking for half the rental rooms.
- D. Commercial Lodging. Table 2.204 controls use, size, access, and frontage.
- E. Commercial Retail. Table 2.204 controls use, size, access, and frontage. In the BP district, the use shall only be permitted on the ground floor of office buildings. In the I district, retail sales are limited to goods produced in the plant and shall meet the accessory use standards (Section 2.206S).
- F. Drive-in Facilities. This section applies to the drive-in facilities, not the primary use to which they are attached. All drive-in facilities shall meet standards 1 through 5 below. Additional standards apply in the U district (6 below) and the BP and I districts (7 below).
1. Access. The use shall provide access from internal circulation, alleys, or cross-access from adjoining properties.
 2. Bufferyard. If the adjoining use is residential, a 0.6 opacity buffer shall be required.
 3. Ordering Station. Where adjoining uses are residential, the ordering station shall be screened by a wall to reduce the potential for noise. Where it fronts a public road, it shall be screened with a hedge to a height of at least six feet.
 4. Take-out Windows. These shall not face the adjoining public road. They shall be located to the side in order to leave the street façade free of automobile traffic. If the adjoining use is residential, it shall meet standard 3 above as well.
 5. Stacking. The use shall provide stacking for 12 vehicles. The plan director may modify this upon reviewing a study of parking at a facility of similar size and type, with comparable traffic volume on the road.
 6. U District. The facilities shall have sidewalk access and be built to the sidewalk line, unless seating is provided next to the sidewalk.
 7. BP and I Districts. These are limited to fast food restaurants and cash stations.
- G. Heavy Retail and Service. Table 2.204 plus the following standards control this use.
1. Fuel dealers are only permitted in the I district.
 2. Lumber or building supplies are permitted in the AU and I districts.

- H. Hospitals. New facilities shall be built on sites of at least five acres, in an area where 30 percent of the land within a two-block radius is available to support related uses. Existing facilities have no minimum area requirement.
- I. Light Auto Services. Section 2.204 controls access and frontage. The following standards are designed to reduce their impact on neighbors and the public.
 - 1. Bay doors should face side yards. Where facing adjoining residential areas, a 1.0 opacity bufferyard is required. Facing a street or rear yard may be permitted. Doors facing a street require a 0.5 opacity bufferyard to provide visual screening.
 - 2. The doors to repair or work areas shall be kept closed unless vehicles are entering or exiting, and such areas shall be fully enclosed.
- J. Mixed Uses. Table 2.204 controls use, size, access, and frontage.
- K. Neighborhood Mart. The mart shall be permitted at a corner location. It shall have frontage on an arterial or collector street that intersects with another street. The following additional standards apply.
 - 1. Neighborhood marts shall be designed so that the building is located on the corner portion of the street, so restaurants, convenience, and gift uses are accessible from the sidewalk. Restaurants may provide outdoor eating facing the sidewalk.
 - 2. The gas pump canopy shall be located behind the building and should provide a pitched roof.
 - 3. Where the parcel abuts residential areas, there shall be a buffer with a six-foot wall or evergreen hedge and two canopy trees per 100 feet.
 - 4. In the BP and I districts, the neighborhood mart shall have access to an arterial road or street and be in a development of at least 50 acres.
- L. Office. Table 2.204 controls use, size, access, and frontage.
- M. Restaurants. Access shall be on a collector, arterial, or nonresidential local street. In the BP district, restaurants may be freestanding or on the ground floor of office buildings. Where freestanding, they shall adjoin an arterial or collector street.
- N. Services. Table 2.204 controls use, size, access, and frontage.
- O. Shopping Centers. These provide multiple individual uses in one or more buildings with common parking. They are regulated by scale and shall meet the following standards.
 - 1. Regional. Centers with greater than 800,000 square feet of floor area shall be located at the intersection of two arterial roads or on arterials with interchange access to a freeway.
 - 2. Sub-regional. Centers with 350,000 to 799,999 square feet of floor area shall be located at the intersection of two arterial roads.
 - 3. Community. Centers with 150,000 to 349,999 square feet of floor area shall be located at the intersection of an arterial and collector or higher-level road.
 - 4. Neighborhood. Centers with 60,000 to 149,999 square feet of floor area shall be located at the intersection of an arterial and collector or higher-level road.
 - 5. Small shopping centers. These contain three or more shops in a single building with a maximum area of 59,999 square feet and shall have direct access to an arterial or collector road.
- P. Vehicle Sales and Service. Table 2.204 and the following standards control this use.
 - 1. In the S or AU districts, uses for the sale and/or service of automobiles, including pickup trucks, or motorcycles shall have a buffer along arterial or collector roads that has an opacity of 0.4, with a

continuous five-foot-high hedge. In the U district, opacity is 0.3 with a four-foot hedge or masonry wall.

2. Vehicle displays are permitted every 200 feet with lighting up to 80 foot-candles and vehicles raised two to five feet above grade.
3. No vehicles shall be parked with hoods up within 100 feet of the abutting streets.
4. In the S, AU, U, and I districts, truck sales shall have bufferyards with opacities of 0.7, 0.5, and 0.4, respectively. Walls or hedges with a height of six feet shall be required.
5. Other Vehicles. Construction and other vehicles shall only be permitted in the AU or I district. The vehicles shall not be displayed with cranes or other extendable equipment in a raised position.

Section 2.307S Recreation and Amusement Uses

A. Adult Uses.

{Sidebar}

This use is generally considered to be socially undesirable but legally must be permitted. Thus, it is very difficult for zoning to deal with. The primary reason for this is that zoning does not permit inquiry into an owner's history or character. Licensing permits both a far more expansive investigation and revocation of the license when problems occur. Additionally, zoning enforcement officers are far less able to deal with enforcement than police. The language of this section is based on the use being licensed. All land use and operational standards should be in the licensing regulations. Thus, in this section, most of the control is based on exterior appearance.

{/Sidebar}

This use is permitted in the AU and I districts, subject to the following.

1. Business License. The use shall have a current adult business license. Loss of the license shall result in the use being closed.
 2. Building. The building shall be designed to operate as a restaurant, bar, or tavern in the event that the adult business license is lost.
 3. Separation. This use shall be a minimum of 400 feet from schools or religious institutions.
 4. Signs. Signage shall be approved with the license. A sign at each entrance, with an area of no more than three square feet, must indicate that no person under 21 shall be admitted.
 5. Windows. No window shall provide a view into the facility. Where there are design controls on-street opacity, these standards shall be met by architectural detailing and design.
 6. Buffers. Where the building entrances or parking abut residential uses or vacant land that can be developed residentially, a buffer having a 1.0 opacity with an eight-foot-high wall or evergreen hedge shall be required.
 7. AU District. Access shall be on a collector, arterial, or nonresidential local street.
 8. I District. The use shall be on an interior lot, not a perimeter lot, of the industrial park.
- B. Campgrounds. This use shall require a parcel of at least 40 acres, with access from a collector or arterial street. It shall meet the following additional requirements.
1. Bufferyard. Either 50 feet of woodlands or a 0.8 opacity bufferyard shall be required.
 2. Water and Sewer. Each campsite shall have water. The park shall have a sewer hook-up for camper discharges. Public restrooms and showers shall be provided within 500 feet of every campsite. If

not using public water and sewer lines, sewerage and water systems shall meet county health department approval.

3. Campsites. Campsites shall be a minimum of 60 by 90 feet and have a fire pit and picnic table.
4. Roads. Interior roads may be gravel, with an eight-inch base. The entrance shall be paved with asphalt for the first 100 feet.
- C. Commercial Amusement, Indoor. In the E district, the maximum floor area is 5,000 square feet. In the S and AU districts, 10,000 square feet is the maximum.
- D. Commercial Amusement, Outdoor. The following additional regulations apply.
 1. Bufferyards. All uses shall have a 0.8 opacity bufferyard.
 2. In the S district, it is only permitted on the existing county fairground property.
 3. In the AU district, it shall be on properties having a minimum of 20 acres, with berms, walls, other structures, or trees of 5 Diameter at Breast Height placed at the property line to reduce noise.
 4. In the I district, such uses may be established on 20-acre parcels.
 5. Such uses shall be subject to any noise ordinances adopted by the council, as many will not be able to meet the noise standards of Article 3.
- E. Recreation, Indoor. In the E district, the maximum floor area is 8,000 square feet. In the S district, the maximum floor area is 15,000 square feet. There is no limitation in other districts.
- F. Recreation, Outdoor. The following additional standards apply.
 1. In the CS, E, S AU, and U districts, when in a cluster development, such uses may be located on local residential streets.
 2. There is no minimum area for public or private development. Active recreation, passive recreation, trails, and gardening are permitted.
 3. Ball fields shall be on a minimum of four acres. Lighted fields shall be on a minimum of 10 acres.
 4. Golf courses are permitted only as part of a cluster or a dedicated country club or park. In residential developments, they shall meet the requirements for golf courses in open spaces (Section 5.208). They shall require a minimum of 50 acres per nine holes.

Section 2.308S Industrial Uses

Limited industrial uses in Table 2.205C are subject to the following standards.

- A. Extraction. There are two types of extraction, those for detention or road fill, and those to extract minerals.
 1. This use is permitted in the CS, E, S, AU, BP, and I districts, where the purpose is to create detention facilities. It is also permitted where a new road is being built and excavation is done for road fill, resulting in a permanent waterbody. Where it is to be stocked with fish, it shall have a depth of 10 feet over 10 percent of the surface area. Low-capacity wells for water supply are also permitted.
 2. Any other extraction requires a conditional use permit (Section 2.404S) that includes high-capacity wells pumping more than 70 gallons per minute.
- B. Heavy Industry. In the I district, heavy industry is permitted as follows.
 1. Enclosed. When conducted entirely within enclosed buildings, the use is permitted anywhere in an industrial park or on individual lots of an acre or more.

2. Exterior Operation. Heavy industry conducted in open buildings, or where the industrial process takes place in an exposed mechanical structure (such as refineries, concrete, or asphalt plants), or where more than 10 percent of the lot area is used for outside storage shall meet the following conditions.
 - a. It shall be located on the interior lots of industrial parks, a minimum of 300 feet from the industrial park's boundary.
 - b. It shall not be visible from the entrance drive unless it is at least 600 feet from a highway.
 - c. It shall have a 0.4 opacity buffer around the lot.
- C. Light Industry. Light industry is permitted in the S, AU, and BP districts as limited below.
 1. Suburban districts. It shall be in masonry buildings with a maximum floor area of 15,000 square feet. No exterior storage shall be permitted, except in spaces of less than 2,000 square feet screened from view by a wall. All shipping shall be by parcel vans, not heavy trucks.
 2. Auto-Urban district. It shall be in masonry buildings with a maximum floor area of 25,000 square feet. No exterior storage shall be permitted, except in spaces of less than 5,000 square feet screened from view by a wall.
 3. Business Park district. Light industry shall be permitted only in business park developments of at least 50 acres. Any such industries shall be located so that all loading areas or truck parking areas shall not be visible from the outside roadways. No exterior storage is permitted.
- D. Recycling and Salvage. All such uses shall be fully enclosed by a wood fence or masonry wall eight feet high. Other buffers are as follows.
 1. Street faces shall have a 0.6 opacity buffer between the road and fence or wall.
 2. A boundary with BP district requires a 0.5 opacity buffer between the district boundary and fence.
 3. A boundary with any other district requires a 1.0 opacity buffer between the district boundary and fence.
 4. Recycling of hazardous wastes is not permitted.
- E. Regional Utilities. These uses have significant nuisance potential which differs by use. The following standards apply.
 1. Location. Such facilities shall be at least 660 feet from any residential development.
 2. Fossil Fuel Plants. These are permitted only in the I district. Oil- or gas-powered plants shall be on parcels of at least 20 acres and have a 1.0 opacity bufferyard. Coal-fired plants shall be on sites of at least 30 acres. They shall have additional detention ponds that are designed to clean runoff from coal stockpiles. A 1.2 opacity buffer shall be required and, in addition, a bermed area shall be provided to screen coal piles from adjoining roads.
 3. Solar plants. These are permitted in the CS, BP, and I districts. The minimum site shall be 10 acres and the property should be screened with a hedge and have a bufferyard with a six-foot fence to control access. Solar panels may be installed on buildings with flat roofs, provided there is a three-foot parapet wall.
 4. Wind Farms. These are permitted on agricultural land or open space in the CS district, provided acreage is sufficient for at least 20 turbines. See Section 2.309D for individual wind turbine requirements.
 5. Sewer Plants. These shall be at least 400 feet from residential areas and have a 1.2 opacity buffer.

6. Water Plants. These shall be on sites of at least five acres and have a 0.6 opacity buffer.
 7. Electrical Transformers. Where input voltage is 69 kV or more, the area shall be protected by walls and/or fencing 12 feet in height to prevent access. This shall be set back at least 20 feet from any property line and screened with low-profile landscaping or hedges.
- F. Warehousing and Transportation. In the BP district, this use shall be permitted only in business park developments of at least 50 acres. No loading areas or truck parking areas shall be visible from the outside roadways. This may be achieved using berms and walls in conjunction with landscaping, and the opacity should be at least 1.0. No buffering shall be required on interior local streets.
- G. Waste Handling. In the I district, waste facilities for paper, cans, plastic, and glass shall be entirely in enclosed buildings, including areas designated for shipping and unloading. Recycling boxes that are fully enclosed, with slots for depositing material, are permitted in the AU district in shopping center parking lots and in parking areas in the I district. All other waste facilities are conditional uses.

Section 2.309S Special Uses

- A. Commercial Communication Towers are permitted in all districts as limited uses, provided they meet the following requirements.
1. Site. The site shall be large enough to accommodate the planned failure of the tower on-site, including all support elements, plus 20 feet on all sides.
 2. Failure. All towers shall have engineering drawings and other material showing planned failure design, indicating how the tower is designed to fall unbroken, break at specific points under stress, or fail in an extreme event.
 3. Security Protection. The tower and support buildings shall be in a fenced enclosure of eight feet topped with barbed wire to prevent access. The fence shall be screened with an evergreen hedge.
 4. Multiple Antennas. All towers shall be designed to support multiple antennas of different compatible communication companies.
 5. Alternative sites. Any application for a new tower shall demonstrate a lack of coverage in the area where the tower is proposed. The application shall include three alternative sites within one mile that could address the lack of coverage. Any site owned by the jurisdiction shall be included where recommended by the planning director.
 6. Viewshed. A map shall be submitted showing the site, topography, tree cover, and the degree to which the site is screened from view of arterial or collector roads.
- B. Heliports. These are permitted in the AU or BP districts, in conjunction with hospitals or government facilities. FAA approval shall be required. They may be permitted in the I district where the heliport is at least 400 feet from any district boundary.
- C. Parking. Public or private parking includes both surface and structured parking.
1. Setbacks. In all districts, the street setback (Table 4.403) shall be that for the dominant use served by the parking within 500 feet.
 2. Surface Parking Buffers. All yards should meet parking buffer standards (Section 8.307), and in the S district, they shall provide one additional plant unit per 100 feet of buffer. In the AU and U districts, one plant unit per 200 feet should be added to the parking buffer.

3. Structured parking in the U district shall provide screening of parked cars on the upper floors in order to blend into the streetscape.
- D. Private Landing Strips. These shall only be permitted in a subdivision or cluster development in the E district having a minimum of 200 acres, where owners may have hangars for private planes or helicopters. The following additional standards apply.
1. The location shall be approved by the FAA as not conflicting with any airport.
 2. The development shall control the land for 1,320 feet out at either end of the runway, either through ownership or easement preventing any development. The width of this extension beyond the end of the runway shall be 300 feet on either side of the runway surface.
 3. The noise contours for the 55 Day-Night Level (DNL) shall be determined by an acoustical engineer, and all land dedicated to this use shall be within the development and shown on the development plat.
 4. Except for helicopters, no jet engines are permitted. The field shall not have services other than fuel for each individual hangar and may not service other aircraft or hold events.
- E. Wind and Solar Power. Wind turbines are desirable, as they provide a source of sustainable energy production. They produce noise, which is a nuisance factor, and are tall, visually dominant elements in the landscape. The following standards govern wind turbine locations.
1. Location. Wind turbines may be located on lots, in parking areas, or on common open space. If located in open space that is resource-protected, the construction is limited by Section 5.212. All turbines shall be located in order to provide the spacing of turbine towers required for efficient operation.
 2. Failure. All applications shall be accompanied by engineering drawings showing a controlled collapse of the turbine structure and blades and the area where material would fall. The wind turbine structure shall be designed for at least 80 mph sustained winds. In areas prone to hurricanes or tornados, resistance to higher wind speeds shall be required by the engineer. All turbine collapse areas should be at least 20 feet from any building.
 3. In the BP or I district, wind turbines may be permitted on any lot, or the developer of a park may create a plan for wind turbine placement for the entire development. No buildings except those associated with the turbine are permitted within the turbine site. The turbine site shall be at least 40 feet from the site boundary.
 4. In the AU district, wind turbines may be permitted on commercial development sites to reduce the use's reliance on carbon-based energy sources. The tower site shall be located at least 20 feet from any building and 40 feet from property lines. Turbines shall be at least 660 feet from any existing residential development.
 5. In the CS, E, or S districts, wind turbines may be permitted on any cluster development to reduce the development's reliance on carbon-based energy sources. The tower site shall be designated as part of the development's open space. The wind turbine's location shall be designated on the site plan and all prospective buyers shall be made aware of the proposed wind turbine. The turbines shall be located at least 1.25 times their height (measured to the height of a vertical blade on the turbine) from any property line, or 300 feet from residential development on the site or adjacent sites.

6. In the CS district, any farmstead may have wind turbines, provided they are sited at least two times the height of the turbine (measured to the height of a vertical blade on the turbine) from the property lines of the farmstead.
7. Individual Solar. Any structure is encouraged to have solar power to reduce dependence of fossil fuels. If mounted on the ground, it shall conform to setbacks.
8. Solar Plants. Where located adjacent to expressways or other limited-access highways, they shall be located on at least 10 acres and surrounded by a buffer of a hedge maintained at a height of five feet. In other locations, they require a 20-acre site and shall meet the same buffer standards.

Section 2.310S Temporary Uses

The following temporary uses are permitted as limited uses, subject to the following standards.

- A. Commercial Outdoor Sales Event. These can occur within a block, area, or a shopping center, and maybe jurisdiction-sponsored. The following rules apply.
 1. A block or area in the jurisdiction may request a single event during the year.
 2. Shopping centers may have up to two such events per year. A plan shall show its location on the site as well as parking and sales areas, to insure adequate parking is available.
 3. A jurisdiction-sponsored event shall have a council resolution approving it, in addition to conforming with the limitations in paragraphs 1 and 2 above. With the approval of a traffic plan by the police department, jurisdiction events may close streets to traffic.
 4. Farmer's markets are not subject to the limitations in this section. See paragraph D below.
- B. Concrete/Asphalt Batch Plant. This shall be located with direct access to the road being repaired. It shall be located at least 660 feet from existing residential uses. The use shall be operated from 6 a.m. to 7 p.m. When the location is 1,320 feet from residential developments, those hours may be extended to the hours that concrete or asphalt is being mixed for construction, when night construction is underway.
- C. Contractor's Office. Wherever these uses are listed as limited uses in Table 2.205C, they shall meet the following conditions.
 1. Subdivision. These may have two contractor's offices in trailers moved to the site.
 2. Land Developments and Buildings under 100,000 square feet. These buildings may have up to three contractor's offices in trailers moved to the site.
 3. Land Developments and Buildings over 100,000 square feet. These buildings may have up to five contractor's offices in trailers moved to the site.
 4. Timing. Contractor's offices may be installed 10 days prior to the start of construction. They shall be removed prior to receiving an occupancy permit.
- D. Farm Stands or Farmer's Markets. Farm stands may be permitted on farmsteads. Farmer's markets shall be established on a street, parking lot, or park by the council after a recommendation from the planning director that the site is suitable for a farmer's market. Days and hours of operation shall also be established. In the CS district, a farm stand shall have a sign budget of 100 square feet. Each stand in a farmer's market may display a sign of eight square feet on that stand. The market shall have a sign of up to 100 square feet to be erected on the day of the farmer's market and removed the same day.

- E. **Garage Sale.** Garage sales may be permitted Friday through Sunday, up to two times a year. Temporary signs are permitted (Section 9.301). Signs are permitted off-site, provided they are erected with the land owner's permission. Garage sales shall obtain a permit from the planning department so that it may track sales. All signs must be posted no earlier than 7 a.m. on Friday and shall be removed by 3 p.m. on Sunday to reduce the length of time signs clutter the neighborhood.
- F. **Model Homes.** Up to two model homes may be built in a development for each dwelling unit type. In the interim before the models have an occupancy permit, a trailer sales office may be installed. It shall be removed within two business days of the model home opening.
- G. **Special Interest Events.** Each event shall be located in a park with the jurisdiction's approval or on land owned by the sponsoring institution. A zoning permit shall be required; before issuing it, the zoning officer shall have a report from the engineer and police chief confirming that the access control plans have been reviewed and safe ingress or egress is ensured. Hiring traffic control personnel may be required.

DIVISION 2.400 CONDITIONAL USES – SUB-URBAN

Section 2.401S Conditional Uses.

The uses listed in Table 2.204 as conditional uses shall meet the standards of this division. In addition, they shall meet the general standards for conditional uses (Section 16.402).

Section 2.402S Protective Care

Where not attached to a police station or jurisdiction offices, this use may be approved in the CS, AU, U, BP, or I district, provided it meets all the following requirements.

- A. **Site Size.** It has a site of at least one acre plus one acre for each 25 prisoners at total capacity.
- B. **Location.** It shall be located on an arterial or collector road. It shall not be permitted within 500 feet of a residential development.
- C. **Adjoining Uses.** There shall be no adjoining uses, such as truck terminals or rail loading, which could provide potential escape routes and no large outdoor storage areas which could provide concealment.
- D. **Open yards.** Open yards without landscaping for at least 50 feet shall be provided outside the fence.
- E. **Bufferyard.** Bufferyards that have an opacity of 0.2 shall be provided on arterial or collector streets located beyond the open yard described in D.
- F. **Posting.** Adjoining streets shall be posted to warn of the use and against picking up hitchhikers.
- G. **Outdoor facilities.** Any outdoor facilities shall be enclosed by a 10-foot fence topped with razor wire or a 12-foot wall.

Section 2.403S Disposal

This use shall be permitted only if the following can be shown.

- A. **Need.** It must be shown that there are no existing disposal facilities in the jurisdiction or region within 10 miles having a projected capacity of less than 10 years.
- B. **Site Conditions.** The design of the site shall protect groundwater and aquifers by one of the following means.

1. The site's soils and geology are of suitable impermeability, thickness, and uniformity to serve as a long-term barrier to leachate leaks. OR
 2. A double liner and a monitoring well system are installed to provide warning if any leachate leaks through the first liner.
- C. Leachates and Gases. A detailed analysis of the chemical composition of leachates and probable production of gases such as methane, based on similar facilities, has been submitted and approved.
- D. Monitoring Wells. One monitoring well shall be placed below the top liner to monitor for leachates. Additional monitoring wells shall be placed at corners of the site, in aquifers below the site. Any results showing leakage shall be immediately reported to the health department. Annual reports are required even if there are no changes.
- E. Collection and Treatment. A detailed plan to collect leachates and gases for treatment or capture must be submitted. For methane or other hydrocarbons, the jurisdiction may require capture and reuse rather than burning off.
- F. Hazardous Wastes. Where hazardous wastes are to be disposed of, the applicant shall submit a list of all such materials. The following additional or modified requirements shall be met.
1. Additional Approval. The state's environmental agency shall review and approve the design of the site, accounting for the hazardous wastes that are to be disposed of on-site.
 2. Liners. The liners shall be designed to resist penetration by the hazardous wastes proposed for disposal, or any likely combination of such wastes.
 3. Monitoring Wells. At least one monitoring well shall be installed per four acres of fill area and shall be placed below the top liner. In addition, a minimum of one monitoring well at each corner of the site shall be provided. Where corner walls are more than 1,000 feet apart, additional wells shall be provided.
 4. Treatment. Hazardous wastes shall be delivered mixed to reduce their reactive potential, or there shall be a facility on-site to reduce such reaction potential prior to disposal.
- G. Roads. Access to a collector or arterial road shall meet the following requirements.
1. The access road shall have suitable width and construction so that traffic to the site can be carried without premature road degradation, or the applicant shall pay the jurisdiction to rebuild the road prior to opening.
 2. There are wheel-wash facilities and street sweepers to keep the road clear of mud or other materials tracked from the site.
 3. The access road's level of service is such that the opening of the facility will not degrade capacity below *Highway Capacity Manual* level of service C. The jurisdiction may require intersection improvements to better allow truck access, at the developer's expense.
- H. Landscaping. The cover on disposal facilities shall be of a sufficient depth to be planted with trees, shrubs, and grasses to appear similar to natural features of comparable size in the region. The perimeter of the site shall have a 0.5 bufferyard.

Section 2.404S Extraction

{Sidebar}

Mining districts are generally used where the resource to be mined is concentrated or where the jurisdiction wants to approve each mining district. This section is used to control mining activities as an alternative to a mining district when extraction must be widespread and permitted as a use in multiple zoning districts.

{/Sidebar}

All extractions, except those permitted as limited uses in Section 2.308A, shall be processed as conditional uses. Each extraction use must meet the following standards.

- A. Area. The site shall have a minimum of 40 contiguous acres.
- B. Road Access. Access shall be from arterial or collector roads except in the CS district. In the CS district, access to existing roads is permitted, provided there are less than three dwelling units per mile on the existing road and the road is designed to handle the weight of vehicles used in extraction. Where roads fail to meet these standards, a new road can be built, or the existing road shall be reconstructed to meet the load requirement, at the developer's expense.
- C. Mineral Rights. The jurisdiction has determined that, due to the possibility of subsidence, the extraction of material subject to mineral rights from beneath the existing development is a threat to property, health, and safety. The applicant shall submit detailed plans for subsurface activities. The plans shall fulfill the following requirements.
 - 1. There is a risk that, due to the composition of overhead strata and other conditions, collapse of tunnels can lead to surface subsidence. Plans shall indicate the type of reinforcement and spacing needed to prevent subsidence. They shall also evaluate the risk of underground fires and provide details of suppression plans.
 - 2. Applications for oil or gas extraction operations shall include detailed studies of the geologic stability of the area and the risk of induced earthquakes, subsidence, and/or drill casing failures polluting the groundwater. The engineering and operation plan shall document steps to be taken to avoid such problems.
- D. Water. Information shall be gathered on existing water supply wells for public, private, or animal use within 1,320 feet of any open-pit mine property, or within the area where pumping will create a cone of depression in the water table.
- E. Monitoring. A program shall be established to monitor earth movement, fire, water quality and flow, and leaking of gases. This shall include monitoring equipment at the corners of the property. It may also include monitoring at existing wellheads, complaint-based monitoring of private or stock wells, and ongoing monitoring of public water supplies. Any significant changes shall be reported immediately, and annual reports are required regardless of change.
- F. Venting. Wellheads for gas or oil shall have systems to capture and store escaping gases that would otherwise be flared or vented.
- G. Mitigation Plan. A mitigation plan is required where there is possible damage to area residents, water supply, and/or damage to structures. The plan shall set forth mitigation strategies, such as shutting down, repairing, buying damaged properties, or other measures. The jurisdiction shall select appraisers to represent the property owners in reviewing the proposed mitigation plan.

- H. Restoration Plan. Applications involving stripping of cover, waste material piles, or open pits shall include a restoration plan to return the site to a near-natural condition, or to design for a specific end use that may be developed on the restored contours. Such plans can involve the creation of a waterbody, in which case, the approved design should include focus on safety of the approaches to the water and maintaining fishable and swimmable water quality.
- I. Performance Bonding. The developer shall be required to establish a performance bond to achieve mitigation and ultimate restoration. Such bonds shall be approved by the attorney.

Section 2.405S Waste Handling

This section covers handling of any liquid or solid wastes and any wastes designated as hazardous. These may be permitted in the I district, except that no radioactive materials shall be handled. Handling of otherwise permitted materials shall receive state and federal approvals. Facilities shall meet the following.

- A. Need. It must be shown that there are no existing waste handling facilities in the jurisdiction or within 10 miles that have a minimum of 10 years of projected capacity to provide this service.
- B. Building. The entire facility, including loading docks, shall be in an enclosed building. The building shall be designed for a negative internal air pressure to retain fumes inside the building.
- C. The building shall be designed with internal tanks or storage areas to contain any liquid spill. The engineer shall review these plans to determine that the storage areas are adequate based on design loads of the proposed facility. All such storage facilities shall be constructed of concrete.
- D. Liners. Any storage area shall have at least two feet of gravel over a liner that is equipped with monitoring equipment to detect and contain any leakage before it can reach the groundwater.
- E. Haulage Plans. The applicant shall provide a plan showing routing of material to and from the facility. The police and fire departments shall review the documents and may require routing changes or determine that the routes are not safe for the transportation of such material.
- F. Emergency Response Plan. The applicant shall submit an emergency response plan indicating alarms, on-site equipment to meet emergency events, on-site containment measures, and coordination with jurisdiction first responders.

URBAN CHARACTER DISTRICTS

Table 2.205 Urban, Sections 2.206U and 2.207U and Divisions 2.300 - Urban and 2.400 - Urban

URBAN DISTRICTS TABLE 2.205A URBAN AGRICULTURE, RESIDENTIAL, AND HOME USES																
Use	Zoning Districts / Section References															
	S	AU		U		UM		UC		NC		RD		I		
Agriculture Uses (2.302U)																
Agriculture	L	A	L	A	L	A	N		N		L	A	N		L	A
Clearing	L	B	L	B	L	B	L	B	L	B	L	B	L	B	L	B
Nursery	L	C	L	C	L	C	N		N		N		N		N	
Residential Uses (2.303U)																
Single-Family	N		N		N		N		N		P		N		LT	
Cluster	L	A	L	A	L	A	N		N		N		L	A	N	
Single-Family	P		P		P		L	B	L	B	P		P		N	
Two-Family	P		P		P		L	B	L	B	LT	B	P		N	
Attached Single-Family	P		P		P		L	B	L	B	LT	B	P		N	
Multifamily	P		P		P		P		P		LT	B	P		N	
Group Homes	L	D	L	D	L	D	N		N		N		L	D	N	
Institutional Residential	L	E	L	E	L	E	L	E	L	E	N		L	E	N	
Modular or Panelized Unit	L	F	L	F	L	F	N		N		L	F	N		N	
Manufactured Home Parks	N		N		N		N		N		L	G	N		N	
Redevelopment	RD		RD		RD		RD		RD		N		P		N	
Small Units	L	H	L	H	L	H	L	H	L	H	N		L	H	N	
Home Uses (2.304U)																
Cottage Industry	N		N		N		N		N		N		N		L	A
Home Business	N		N		N		N		N		N		N		L	B
Home Day Care	L	C	L	C	L	C	N		N		N		L	C	L	C
Home Occupation	P		P		P		P		P		P		P		P	
Live/Work	L	D	L	D	L	D	N		T	D	N		L	D	N	

URBAN DISTRICTS
TABLE 2.205B URBAN
INSTITUTIONAL, COMMERCIAL, AND RECREATION AND AMUSEMENT USES

Use	Zoning Districts / Section References															
	S	AU	U	UM	UC	NC	RD	I								
Institutional Uses (2.305U)																
Assembly	LS	A	LS	A	LS	A	P		P		N		LS	A	N	
Institutional	LS	B	LS	B	LS	B	P		P		N		LS	B	N	
Protective Care	L	C	N		L	C	L	C	L	C	N		N		N	
Public Service	L	D	L	D	L	D	L	D	L	D	L	D	P		P	
Utilities, Local	P		P		P		P		P		L	E	P		P	
Commercial Uses (2.306U)																
Bed and Breakfast	L	A	L	A	L	A	P		P		N		N		N	
Billboards	N		L	B	N		N		N		N		N		L	B
Commercial Lodging	LS	C	LS	C	LS	C	P		P		N		P		N	
Commercial Retail	LS	D	LS	D	LS	D	P		P		L	D	P		L	D
Drive-in Facilities	L	E	LS	E	LS	E	N		N		N		L	E	L	E
Heavy Retail and Service	N		L	F	N		N		N		N		N		N	
Hospitals	LS	G	LS	G	LS	G	P		P		N		N		N	
Light Auto Services	LS	H	LS	H	LS	H	N		N		N		N		L	H
Mixed Uses	LS	I	N		LS	I	P		P		N		L	I	N	
Neighborhood Mart	LS	J	LS	J	LS	J	N		N		LT	J	L	J	L	J
Office	LS	K	N		LS	K	P		P		LT	K	P		L	K
Restaurant	LS	L	LS	L	LS	L	P		P		N		L	L	L	L
Services	LS	M	LS	M	LS	M	P		P		N		P		N	
Shopping Center	LS	N	N		LS	N	L	N	L	N	N		P		N	
Vehicle Sales and Service	LS	O	LS	O	LS	O	N		N		N		N		N	
Veterinary and Kennel	LS	P	LS	P	LS	P	L	P	L	P	N		N		N	
Recreation and Amusement Uses (2.307U)																
Adult Uses	N		LS	A	N		N		L	A	N		N		L	A
Commercial Amusement, Indoor	LS	B	N		LS	B	L	B	L	B	N		LS	B	N	
Commercial Amusement, Outdoor	N		LS	C	LS	C	L	C	L	C	N		N		N	
Recreation, Indoor	LS	D	N		LS	D	L	D	N		N		P		N	
Recreation, Outdoor	L	E	L	E	L	E	L	E	L	E	N		N		N	

URBAN DISTRICTS
TABLE 2.205C URBAN
INDUSTRIAL, SPECIAL, AND TEMPORARY USES

Use	Zoning Districts / Section References															
	S	AU		U		UM		UC		NC		RD		I		
Industrial Uses (2.308U)																
Disposal	N		N		N		N		N		N		N		C	2.404U
Extraction	C	2.405U	N		C	2.405U	C	2.405U	C	2.405U	C	2.405U	C	2.405U	C	2.405U
Heavy Industry	N		N		N		N		N		N		N		P	A
Light Industry	N		L	B	L	B	N		N		N		L	B	P	
Recycling and Salvage	N		N		N		N		N		N		N		L	C
Warehousing and Transportation	N		N		N		N		P		N		N		P	
Waste Transfer Facilities	N		L	E	L	E	N		N		N		N		L	E
Waste, Hazardous	N		N		N		N		N		N		N		C	2.406U
Special Uses (2.309U)																
Airports (requires airport district)	N		N		N		N		N		N		N		N	
Commercial Communication Antennas	L	A	L	A	L	A	L	A	L	A	N		L	A	L	A
Heliports	N		N		L	B	L	B	L	B	N		N		L	B
Parking	L	C	L	C	L	C	L	C	L	C	N		L	C	L	C
Wind and Solar Power	L	D	L	D	L	D	L	D	L	D	N		L	D	L	D
Temporary Uses (2.310U)																
Commercial Outdoor Sales	P		N		P		P		P		N		N		N	
Concrete/Asphalt Batch Plant	L	A	L	A	L	A	L	A	L	A	N		L	A	L	A
Contractor's Office	L	B	L	B	L	B	L	B	L	B	N		L	B	L	B
Farmer's Markets	L	C	L	C	L	C	N		N		N		N		N	
Garage Sales	L	D	L	D	L	D	N		N		N		L	D	N	
Model Homes	P		P		P		P		N		N		P		N	
Public Interest Events	P		P		P		P		N		N		P		N	
Special Interest Events	L	E	L	E	L	E	N		N		N		L	E	N	

Section 2.206U Accessory Uses

These are secondary uses of a property. The primary use must be permitted in the district in Table 2.204. The following standards apply to accessory uses.

- A. Ownership. The accessory use must be part of the business or primary use and under common ownership.
- B. Scale. It shall be secondary in area to the primary use, occupying no more than 25 percent of the building.
- C. Association. The use is essential to, functionally related to, or traditionally commonly associated with the primary use.
- D. Not Permitted in Table 2.204. Where the use is not permitted in the district, it may be permitted as an accessory use if it is not more intense than the primary use and does not constitute more than 10 percent of the building.
- E. Signage. There shall be no exterior signage advertising the accessory use. All signage shall be for the primary use, except that directional signs with an area of no more than two square feet may be permitted where there are separate entrances.
- F. No use prohibited in Section 2.207U shall be permitted as an accessory use.

Section 2.207U Prohibited Uses

All uses indicated by an **N** in Tables 2.205A–C are prohibited in the applicable district. The following uses are prohibited within the jurisdiction.

- A. Forestry
- B. Intensive Agriculture
- C. Campgrounds
- D. Radioactive waste processing or disposal
- E. Landfills
- F. Farm Stands
- G. Private Landing Strips

DIVISION 2.300 LIMITED USES - URBAN

Section 2.301U Purpose

Limited uses can be limited by location, scale, or separation, which may greatly restrict where they may be permitted in a district. Another form of restriction requires that limited uses be attached to another use type. In some communities, mostly older cities, some uses may be restricted based on their existence at the time of adoption or other specified time.

Section 2.302U Agricultural Uses

- A. Agriculture. Gardens are permitted on all residential lots in the S, AU, U, and NC districts. In the S district's cluster development, common gardens are permitted in designated open space. In the I district, commercial agriculture is permitted on roofs or inside buildings designed or refitted for

agricultural production. Such structures shall be designed to support the floor loadings. On-site sales are permitted, provided they occupy less than 4 percent of the floor area.

- B. Clearing. Clearing is permitted at the time of site plan or building approval in compliance with the site-capacity calculations. See Division 3.200.
- C. Nursery. In the S, AU, or U districts, nurseries that grow plants in the soil or in greenhouses are permitted, provided the greenhouses occupy no more than 50 percent of the site in S districts, and 70 percent in AU districts. Both retail and wholesale operations are permitted. The sale of garden equipment and seeds is also permitted, provided it occupies less than 20 percent of the floor area. Nurseries shall only be located on arterial or collector streets.

Section 2.303U Residential Uses

The following standards apply to limited residential uses.

- A. Cluster. Cluster development is permitted on unplatted land or as redevelopment on contiguous platted land consisting of a half-block or more where existing parcels are combined.
- B. Dwelling Unit Types in the NC District. Preexisting lots and dwelling types become conforming. New construction for these types is permitted only in NC sub-districts as follows.
 - 1. Single-family NC₅ alley, 5.5, 8, 12n, or 12w
 - 2. Duplex NC_D
 - 3. Townhouse NC_{TH}
 - 4. Manufactured Homes NC_{MH}
 - 5. Multifamily 5–8 stories NC_{MF8}
- C. Dwelling Unit Types in the UM and UC Districts. The unit types in 1 through 4 above are permitted to be built above street level, on building roofs, or on pedestrian precinct levels.
- D. Group Homes. These are limited to the conversion of existing single-family dwellings or two-family twin or duplex dwellings. They shall provide housing for no more than six individuals, except dwellings over 3,500 square feet, which may have 10. Live-in staff are counted toward the total. Each group home shall have an exclusive nine-block area in which no other group home may be located. See Figure 2.303E.

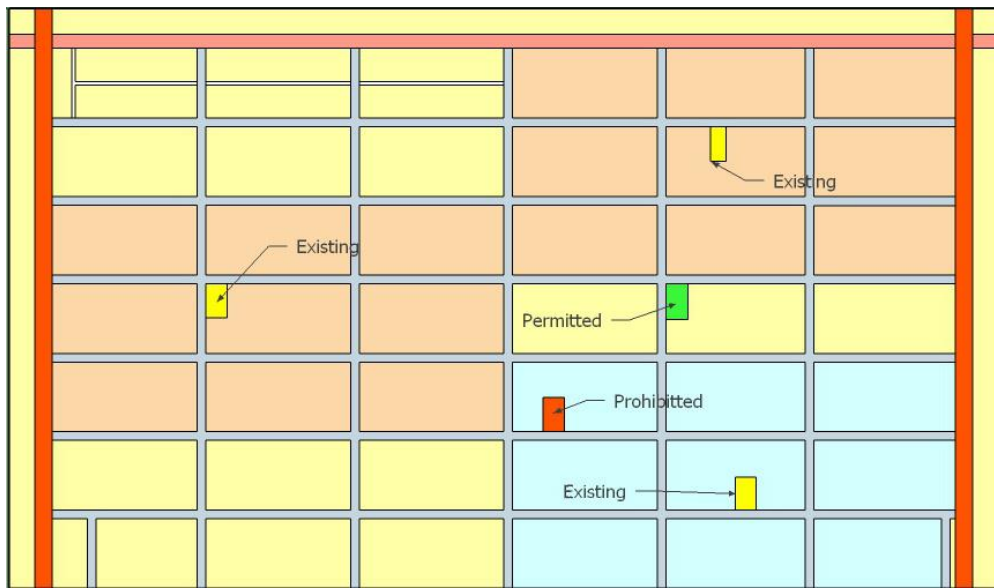


Figure 2.303E Location of Group Homes. Yellow indicates existing units. Green indicates where an additional unit may be built, and red where one would be prohibited.

- E. Institutional Residential. Institutional residential densities are limited by FAR. Such uses shall provide 15 square feet of outdoor recreation and green space for each resident, at grade or on roofs.
- F. Modular or Panelized Unit. These units are built in factories and assembled on-site. They are permitted in any of the types as set forth in B above.
- G. Manufactured Home Parks. These are permitted only in the NC_{MH} district. At the time of sale or release, the units shall be inspected to determine if they meet the standards of the National Manufactured Housing Construction and Safety Act of 1974, 42 U.S.C. 5401 and otherwise remain safe to live in. If they fail the inspection due to physical deterioration, irreparable failure of electrical systems, or other health and safety conditions, they shall be removed.
- H. Small Units. Small units are permitted under the following requirements. These units shall include open space adequate to afford access to each unit and provide for storm water detention. Density is determined by the small-unit type (Section 4.302) and location (Section 4.303).

Section 2.304U Home Uses

The following standards apply to home uses that are limited.

- A. Cottage Industry. This is permitted only on lots with existing single-family homes in the I district.
- B. Home Business. This is permitted on lots with existing single-family homes in the BP and I districts.
- C. Home Day Care. The provider of home day care shall reside on the property and the use shall meet the following conditions.
 - 1. License. The owner shall have applicable state and local licenses.
 - 2. Lot Size. This varies by character types. In the S district, the lot must have a minimum area of 10,000 square feet. In the AU and U districts, the lot must have a minimum area of 7,500 square feet.

3. An outdoor play area of 100 square feet per child shall be provided and enclosed with a six-foot fence, at grade or on roofs. A maximum of 10 children, including the owner's children, shall be permitted.
 4. Fire safety. The building shall meet all fire safety and exit requirements for day care.
 5. Access. The use may be accessed from collector or local streets, except cul-de-sacs.
 6. Parking. The planning director, upon review of on-site conditions, may approve on-street parking spaces assigned for the use or may require off-street pickup from a driveway.
- D. Live/Work. This use is permitted in new developments on sites with a minimum area of 18,000 square feet. The facility shall have a space on the ground floor or in a separate accessory building on a single-family lot. Two-family and townhouse configurations are also permitted, where the space on the ground floor is located at the front of the house.

Section 2.305U Institutional Uses

The following are limitations on institutional uses.

- A. Assembly. This use is limited in scale by the road from which it has access, to ensure the road has the capacity to handle peak traffic. The following are the scale limitations by street type.
 1. Arterial. On two-lane arterials, the maximum size is 24,000 square feet. There is no limitation on arterials that have four or more lanes.
 2. Collector. The maximum size is 18,000 square feet.
 3. Residential Collector. The maximum size is 12,000 square feet.
 4. Local Street. The maximum size is 6,000 square feet.
- B. Institutional. This use is limited in scale by the road from which it has access. The following are the scale limitations by street type.
 1. Arterial. On two-lane arterials, the maximum size is 40,000 square feet. There is no limitation on arterials that have four or more lanes.
 2. Collector. The maximum size is 25,000 square feet.
- C. Protective Care. This use may be located in the U, UM, or UC districts, provided it is attached to a police station or courthouse. The following additional standards apply.
 1. In such buildings, it shall have separate internal access control rather than direct access from the street.
 2. In the UM and UC districts, these buildings shall be located at least 400 feet from any park or public plaza and provide the district's minimum FARs.
 3. All other protective care facilities shall require a conditional use permit.
- D. Public Service. These shall be located where needed to provide police, fire, library, or post office services for the jurisdiction and shall be located on collector or higher roads.
- E. Utilities, Local. In the NC district, the utility must demonstrate that there are no sites outside the district that can provide the service.

Section 2.306U Commercial Uses

Commercial uses permitted in the S, AU, and U districts shall be required to meet the standards of Table 2.204. In the RD district, there may be a need to tailor the **LS** standards to unique conditions in redevelopment areas. Access controls prohibit such uses on residential streets.

- A. Bed and Breakfast. These may be located on residential streets in single-family homes of at least 3,000 square feet, with three to six guest bedrooms. The owners shall live in the unit. Parking shall be provided on-lot for residents and guests, unless the planning director determines that on-street parking can be provided based on available evening spaces. The owner shall prepare breakfasts for the guests.
- B. Billboards. These are commercial uses where land is rented or leased to a sign company or other advertiser for income to the property owner. The property may have other uses. They shall be located at least one foot behind the street setback, district setback, or use setback, whichever is greater. They shall be located at least 200 feet from a zoning district boundary. The area, height, spacing, and frontage requirements are contained in Table 2.306B.

Table 2.306B Urban Urban Billboard Standards				
District	Maximum		Minimum	
	Size	Height	Lot Frontage	Spacing
AU	450	30	400	800
BP	600	30	660	800
I	600	40	500	600

- C. Commercial Lodging. In the S, AU, U, and BP districts, these uses shall meet the standards of Section 2.204. They may be in mixed-use buildings in the UM and UC districts.
- D. Commercial Retail. In the S, U, and BP districts, these uses shall meet the standards of Section 2.203. In other districts, the following shall apply.
 - 1. In UM and UC districts, they shall be in mixed-use buildings.
 - 2. In the AU district, they are only permitted on arterials where at least 40 percent of traffic is regional and shall be limited to 4,000 square feet.
 - 3. In the NC district, any use built as a commercial building prior to the adoption of this ordinance shall be permitted to continue in commercial retail or be restored to this use, provided it has a ground floor area of less than 2,500 square feet.
 - 4. In the BP district, this use is permitted on the ground floor of office buildings. In the I district, retail sales are limited to goods produced in the plant and may occupy no more than 5 percent of the floor area.
 - 5. In the U district, a supermarket or building supply store may be one story but shall have at least 35 percent of its parking across the street, with 15 feet of landscaping along the street face.
- E. Drive-in Facilities. All drive-in facilities shall be attached to or associated with uses permitted in the district and shall meet the following requirements.
 - 1. Access. When in a freestanding lot, the use shall provide access from alleys or cross-access from adjoining properties. If the planning director finds that direct access to a drive-in facility from an

- arterial or major collector street contributes to unnecessary congestion or safety issues at that location, the use may be prohibited.
2. Bufferyard. If the adjoining use is residential, a bufferyard with at least 0.6 opacity shall be required.
 3. Ordering Station. Where adjoining uses are residential, the ordering station shall be screened by a wall to reduce potential noise from that area. Where it fronts a public street, it shall be screened with a hedge to a height of six feet.
 4. Take-out Windows. These shall not face the adjoining public road but shall be located to the side or rear.
 5. There shall be stacking for 12 vehicles. The planning director may modify this if a submitted parking and use study of roads with similar traffic volumes justifies a lower stacking requirement.
 6. In the BP district, these are limited to fast food restaurants and banks.
- F. Heavy Retail and Service. This use is permitted in the AU, and BP districts, and shall meet the standards of Section 2.204.
- G. Hospitals. Hospitals already exist in most urban areas, so new hospitals are ones to which standards apply. Hospital scale is the primary element, classed by size: less than 100 beds, 100–299 beds, or 300-plus beds. The following locational criteria apply.
1. Less than 100 beds require frontage on a collector street.
 2. 100–299 beds require location on an arterial.
 3. 300 or more beds require location on a four-lane arterial.
 4. All require approval of emergency, circulation, and parking locations by the engineer.
- H. Light Auto Services. In the S, AU, U, and BP districts, these shall meet the standards of Section 2.204. They are also permitted in the I district, subject to paragraph 4 below. All light auto services need to be located on the lot to reduce their impact on neighboring residential areas and the public.
1. Gasoline pumps shall be located to the rear of the buildings.
 2. Bay doors should face side yards. Where facing an adjoining residential area, a 1.0 opacity bufferyard is required. Facing a street or rear yard may be permitted. Doors facing a street require a 0.5 opacity bufferyard to provide visual screening.
 3. The doors to repair or work areas shall be kept closed unless vehicles are entering or exiting, and such areas shall be fully enclosed.
 4. In the BP and I districts, they are permitted at the entry roads to park-type land developments of 60 or more acres.
- I. Mixed Uses. These are permitted in the S, U, and BP districts, and shall meet the standards of Section 2.203.
- J. Neighborhood Mart. In the S, AU, and U districts, this use shall meet the standards of Section 2.204. In other districts, the following requirements apply.
1. Neighborhood marts shall be designed so that the building is located on the street corner portion of the lot, so restaurant, convenience, and gift shop uses are accessible from the sidewalk.
 2. The gas pump canopy shall have a pitched roof and shall be located behind the building.
 3. Where the parcel abuts a residential area, there shall be a buffer with a six-foot wall or evergreen hedge, and two canopy trees per 100 feet.

4. These may be freestanding in the BP and I districts, where they must front on arterial or collector roads but take access from the entrance roads to a development of at least 60 acres.
 5. In the NC district, such uses existing at the time of adoption may continue.
- K. Office. In the S and U districts, these uses shall meet the standards of Section 2.204. In other districts, the following requirements apply.
1. In the I district, they are permitted in conjunction with an industrial, warehouse, or trucking operation, provided they constitute no more than 30 percent of the total floor area.
 2. In the NC district, all offices of less than 3,000 square feet that existed and were used as offices on the date of adoption shall be permitted to continue as conforming uses.
- L. Restaurants. In the S, AU, and U districts, these shall meet the standards of Section 2.204. In the UM and UC districts, they shall be in mixed-use buildings. In the BP district, they may be freestanding or on the ground floor of office buildings.
- M. Services. In the S, AU, and U districts, these shall meet the standards of Section 2.204. In the UM and UC districts, they shall be in mixed-use buildings. In the NC district, any use built for service use prior to the adoption of this ordinance that is less than 2,500 square feet in area on the ground floor may be permitted to continue or be reestablished as a service use.
- N. Shopping Centers. In the S and U districts, these shall meet the standards of Section 2.204. In the UM and UC districts, they shall be in mixed-use buildings providing at least four floors of stores.
- O. Vehicle Sales and Service. In the S, AU, and U districts, these shall meet the standards of Section 2.204. In the U district, they shall be multistory buildings, with no more than 15 at-grade parking spaces and no outside displays.
- P. Veterinary or Kennel. In the S, AU, and U districts, these shall meet the standards of Section 2.204. In the UM and UC districts, they shall be on the ground floor of mixed-use buildings. In all districts, animals shall be housed in the interior, with no outdoor runs.

Section 2.307U Recreation and Amusement Uses

The following subsections provide limited use requirements for amusement and recreational uses.

A. Adult Uses.

{Sidebar}

This use is generally considered to be socially undesirable but, legally, it must be permitted. Thus, it is a very difficult use to deal with. The primary reason for this is that zoning does not permit inquiry into an owner's history or character. Licensing permits both a far more expansive investigation and revocation of the license when problems occur. Additionally, zoning enforcement officers are far less able to deal with enforcement than police. The language of this section is based on adult uses being licensed. All land use and operational standards should be in the licensing ordinance. Thus, in this section, most of the control is based on exterior appearance.

{/Sidebar}

This use is permitted in the AU, UC, and I districts, subject to the following limitations.

1. Business License. The use shall have a current adult business license. Loss of the license shall result in the use being closed.
2. Building. The building shall be designed to operate as a restaurant, bar, or tavern in the event the license is lost.

3. Separation. This use shall be a minimum of 500 feet from schools or religious institutions, and 800 feet from another adult use.
 4. Signs. Signage shall be approved with the license and shall meet the requirements specified in Article 9. A sign at each entrance with an area of no more than three square feet shall indicate that no person under 21 shall be admitted.
 5. Windows. No window shall provide a view into the facility. Where there are design controls on-street opacity, these standards shall be met by architectural detailing and design.
 6. AU District. Where the building's entrances or parking areas abut residential uses or vacant land that can be developed for residential uses, a 1.0 opacity bufferyard with an eight-foot wall or evergreen hedge is required. Access shall be on a collector or arterial street.
 7. UC District. The use shall not be on the ground floor. On upper floors, it shall not share access with retail or other uses.
 8. I District. The use shall be on an interior lot, not on a perimeter lot of the industrial park.
- B. Commercial Amusement, Indoor. In the S, RD, and U districts, this shall meet the standards of Section 2.204. The use is permitted in mixed-use buildings on any street in the UM or UC districts.
 - C. Commercial Amusement, Outdoor. In the AU, U, UM, or UC districts, this shall meet the standards of Section 2.204. In addition, it shall have a minimum of 10 acres. In the AU and U districts, the use shall have a 0.5 buffer on all lot lines.
 - D. Recreation, Indoor. In the S and U districts, this shall meet the standards of Section 2.204. In the UM and U districts, it is permitted on any street in mixed-use buildings.
 - E. Recreation, Outdoor. In the S, AU, U, UM, and UC districts, private development may provide active recreation, passive recreation, trails, and gardening on open space in the development. Public parks providing any outdoor recreational use are permitted. At-grade driving ranges, mini golf, or par-three courses are limited to arterial or collector locations in the AU district. Outdoor courts or recreation space is permitted on upper-level outdoor spaces in the U, UM, or UC districts.

Section 2.308U Industrial Uses

Limited industrial uses in Tables 2.205A–C are subject to the following standards.

- A. Heavy Industry. This use is permitted in the BP and I districts, pursuant to the following.
 1. In the BP district, it is permitted only in all-masonry buildings less than 10,000 square feet in area, where all materials and products are shipped by parcel vans.
 2. I district. In the I district, heavy industry may be permitted if conducted in enclosed buildings on interior lots of industrial parks. No more than 25 percent of the lot may be used for outdoor storage. Outdoor storage shall be screened with evergreen hedges five feet high at planting and allowed to grow to a height that screens the material.
- B. Light Industry. In the AU and U districts, light industry shall be permitted only on collector or arterial roads. The use shall be in enclosed masonry buildings of less than 15,000 square feet, where all materials and products are shipped by parcel vans.
- C. Recycling and Salvage. The following rules apply to these uses.
 1. Existing Uses. All existing uses shall be required to replace existing screening with masonry walls eight feet high and the wall screened with a 0.4 opacity buffer within five years.

2. New Uses. These are permitted only in the HI districts. They require a 20-foot-wide buffer with an eight-foot-high masonry wall around the property and a 0.5 opacity buffer between a road and the wall.
- D. Warehousing and Transportation. In the BP district, this use shall be permitted only in business park developments of at least 50 acres. No loading areas or truck parking areas shall be visible from outside roadways. Berms and walls, in conjunction with landscaping, may be used to achieve this and the opacity should be at least 0.7. No buffering shall be required on interior local streets.
- E. Waste Transfer Facilities. In the AU and U districts, these shall be limited to recycling of metal, glass, plastic, or paper with no organic wastes or hazardous wastes. There shall be full enclosed storage where wastes can be deposited. They shall be co-located in shopping center parking lots. In the I or HI districts, waste separation and reshipment facilities are permitted in buildings where waste can be brought by waste haulers for separation into recyclables and organic materials, with the waste streams then separated and transported to landfills or recycling plants. They may be located only on interior lots of I or HI district industrial parks of 40 acres or more.

Section 2.309U Special Uses

- A. Commercial Communication Antennas. Such antennas are permitted in all districts as limited uses, provided they meet the following requirements.
1. Existing Buildings. The use of water towers or roofs for whip antennas shall not exceed the height of the structure by more than 30 feet. Other antennas shall not exceed the height limit and should be designed to blend into the original building's design.
 2. Historic Districts. No antennas or towers shall be permitted in historic overlay districts.
- B. Heliports. These are permitted in the AU, U, UM, and UC districts in conjunction with hospitals or government facilities. They are also permitted on sites exceeding five acres in the I and HI districts, in areas where the primary use operates helicopters in its weekly operations. FAA approval shall be required before permits are issued.
- C. Parking. Public and private surface and structured parking are permitted, subject to the following requirements.
1. Street Setbacks. Parking in all districts shall meet the street setbacks for the district (Table 4.404), depending on the dominant use served within 500 feet.
 2. Surface Parking in S and AU Districts. Parking shall have a parking buffer (Table 8.307) on all sides plus one plant unit per 100 feet. In the AU district, one plant unit per 200 feet shall be added to the parking buffer.
 3. Surface Parking in U, UM, UC Districts. These shall be permitted as long-term temporary use and require a parking buffer between the parking and sidewalk. Its function in the streetscape shall be enhanced by providing space for bus transit stops, kiosks, or seating that integrates it into the surrounding streetscape. Before approval, the applicants shall be required to evaluate building a parking structure and demonstrate that this is not feasible.
 4. Structured Parking. This is a permitted use in the U, UM, or UC districts. It is encouraged as an alternative to surface parking in the S and AU districts for commercial centers. The planning director is authorized to recalculate the maximum permitted floor area in the S and AU districts.

D. Wind and Solar Power. The noise and scale issues of wind turbines are more severe in an urban environment, even though the need for sustainable power is great. Solar lacks noise problems but is more difficult to use in urban districts. Wind and solar shall be permitted only in accordance with the following requirements.

1. Wind Farms. Where the jurisdiction's comprehensive plan has designated an area within an urban district for a wind farm and an overlay district with a capacity for at least 20 turbines has been created, wind farms are permitted in the overlay district. The wind turbines shall not be closer than 660 feet to the property line of the wind farm.
2. Wind Turbines. Standards vary by district.
 - a. UM or UC District. They may be on a building in the UM or UC district, where they are mounted on the roof as part of the roof structure. The allowed height for the building may be increased to permit the structure housing the wind turbines to exceed the maximum height for the district. Figure 2.309D illustrates the placing of the turbines and the additional height permitted.

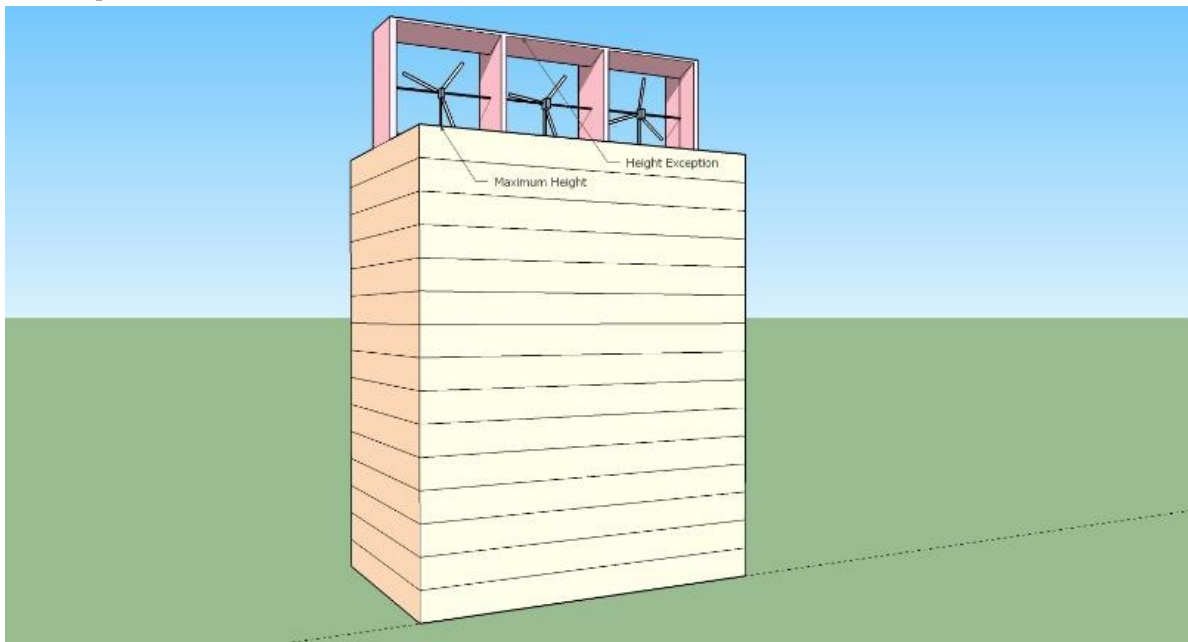


Figure 2.309D Wind turbines atop building increases height

- b. Use Districts. In the BP, I, HI, or P districts, they may be approved either for an individual site or in industrial parks as part of the final plan.
3. Turbine Design. All applications shall be accompanied by engineering drawings showing a controlled collapse of the turbine structure and blades and the area where material would fall. The application shall also define the maximum wind speeds for which the wind turbine structure is designed. Normally, turbine structures designed to withstand 80 mph sustained wind speeds will be sufficient. In areas prone to hurricanes or tornados, resistance to higher wind speeds shall be required by the engineer. All turbine collapse areas should be at least 20 feet from any building and, in hurricane areas, a study showing collapse shall be submitted for the wind speed designated by the engineer.
4. Solar. Individual uses may use solar panels to reduce their dependence on fossil fuels.

Section 2.310U Temporary Uses

Temporary uses are permitted as limited uses, subject to the following standards.

- A. Concrete/Asphalt Batch Plant. The plant shall be located with direct access to the road being repaired. It shall be located at least 500 feet from residential uses and operated from 6 a.m. to 7 p.m. Where the use is more than 500 feet of residential there is no operational restriction.
- B. Contractor's Office. These shall meet the following conditions.
 - 1. Subdivision or Land Developments. These may have contractor's offices in trailers moved to the site.
 - 2. Buildings over 100,000 square feet. These buildings may have contractor's offices in trailers moved to the site.
 - 3. Timing. All such contractor's offices may be installed 10 days prior to the start of construction. They shall be removed prior to receiving an occupancy permit for individual buildings, or within 10 days after completion of the final unit in subdivisions or land developments.
- C. Farmer's Markets. These may be permitted on any parking lot or park where the council establishes a farmer's market after the planning director has recommended the site as suitable. Days and hours of operation shall be established for these markets by the council. Users are responsible for cleaning the site after closing or the jurisdiction may charge a fee for such cleaning.
- D. Garage Sales. These may be permitted Friday through Sunday, up to two times a year. Temporary signs are permitted (Section 9.301). Signs are permitted off-site, provided they are erected with the land owner's permission. Garage sales shall obtain a permit from the planning department so that it may track sales. All signs must be posted no earlier than 7 a.m. on Friday and shall be removed by 3 p.m. on Sunday to reduce the length of time signs clutter the neighborhood.
- E. Special Interest Events. In the S, AU, and U districts, events shall be located in a park with jurisdiction approval or on land owned by the sponsoring institution. A zoning permit shall be required and, before issuing it, the zoning officer shall receive a report from the engineer and police chief confirming that the access control plans have been reviewed and safe ingress and egress is ensured. Hiring of traffic control personnel may be required.

DIVISION 2.400 CONDITIONAL USES - URBAN

Section 2.401U Conditional Uses

The following are standards that apply to uses designated **C** in Tables 2.205A–C. Any conditional use shall meet the criteria in this division as well as those required in Section 16.402.

Section 2.402U Protective Care

This use may be located in the U and UC districts, provided it is associated with a federal, state, or jurisdiction courthouse and is designed only to accommodate persons awaiting trial within the next two months and those waiting to be moved to long-term facilities after trial. The police chief, upon reviewing procedures for moving prisoners to court appearances, shall approve the procedures as protecting jurisdiction residents.

Section 2.403U Commercial Amusement, Outdoor

A plan of the facility that provides details of all noise-generating activity, including that of crowds and operation of equipment and other vehicles involved in the amusement, shall be submitted. Lighting requirements shall also be submitted. Proposed hours of operation and seasons of use shall be identified. An area map shall indicate all existing land uses within 660 feet of the site. The following requirements shall be met.

- A. Noise. A noise contour map shall be submitted to determine if the standards of Section 5.710 are met. Where they are not met, buffering, landscaping, walls, architecture, and/or reduced hours of operation may be imposed to protect residential uses.
- B. Traffic. A traffic study shall be submitted that indicates that peak traffic can be handled and that the police have signed off on the plan. A contribution to the police may be required to offset the added costs. The study should identify the change in *Highway Capacity Manual* level of service when the facility is in operation. The jurisdiction may require off-site improvements to reduce impact or require special traffic control, at the owner's expense, to maintain traffic flows on major roads, orderly egress and ingress, and emergency access.

Section 2.404U Disposal

The only permitted disposal process is incineration for generating power or heating.

- A. Need. It must be shown that there are no existing disposal facilities in the jurisdiction or region with a projected capacity for at least 10 years or that the jurisdiction would save money and/or reduce carbon releases from energy generation versus hauling of wastes.
- B. Approval. The process must be approved by the US EPA and applicable state agency as meeting air quality standards.
- C. Transportation. The waste from the incineration shall be transported out of the jurisdiction by rail to an approved landfill.
- D. Site. The site shall be at least 660 feet from residential developments.

Section 2.405U Extraction

This use is permitted in all districts and applies only to extraction of material for tunnels, transit, highways, storm sewers, or storm water management facilities. The following requirements shall be met.

- A. Plan. The extraction shall occur only for the jurisdiction or special districts serving the area.
- B. Location. The location should be at a site where extracted materials can be removed by truck or rail. It shall be least 300 feet from residential uses.
- C. Acquisition. The jurisdiction shall acquire or lease all land at the point where materials will be removed or equipment inserted.
- D. Transportation. There shall be a plan for transportation of material to a disposal site. The route shall be approved by the jurisdiction. At the completion of extraction, all roads and sidewalks shall be inspected and any damage repaired.

- E. Buffer. A buffer may be required using walls or roofed enclosures to protect residents. A noise study shall be submitted, and additional buffering or limited hours of operation may be required to keep the noise to 60 DNL.

Section 2.406U Hazardous Waste Facilities

Hazardous waste facilities shall exist only to prepare the material for shipment to a disposal site. All work shall be done in enclosed buildings and shall meet the following conditions.

- A. Air Pressure. Negative air pressure in separation, handling, and storage areas of the building shall be maintained to ensure fumes and gases are contained and cleaned within the building before release into the atmosphere.
- B. Loading. Loading areas and containers waiting for transportation shall be under a roof. The loading bays shall be depressed below grade, so any spillage is contained in the loading areas.
- C. Drainage. All areas within the structure where materials are stored or handled shall have spill drainage that is not connected to the exterior or storm or sanitary sewers, so spills are contained for cleanup.
- D. Sewerage. Only sanitary facilities in the building may be directly connected to sanitary sewers. All other waste water or spills shall be pretreated to jurisdiction specifications before being released to sewers.
- E. Emergency Plans. Plans detailing the types of wastes processed and possible spillage or accidents shall be filed with the fire and police departments. The engineer shall review the plans to ensure that the maximum feasible amount of spillage or discharge is contained in the building. Fire or other emergency equipment shall be located to prevent spills into the surrounding areas.
- F. Truck or Rail Routing. The routes taken by hazardous materials to and from the site shall be mapped and the engineer and fire marshal shall approve or require changes to minimize danger to the public from accidents.

ARTICLE 3 SUSTAINABILITY AND INTENSITY

DIVISION 3.100 PURPOSE

Section 3.101 Purpose

The purposes of this article are as follows.

- A. Sustainability. The article's first purpose is to maximize sustainability of the jurisdiction during development and over time by utilizing the four following methods.
 - 1. Avoid or minimize the cutting of vegetation and disturbing of soil to reduce the release of stored carbon during development.
 - 2. Avoid or minimize damage to other natural resources.
 - 3. Encourage design that allows natural cycles to function.
 - 4. Maximize the efficiency of development to promote a sustainable community form. Clustering is permitted by right in all districts, and there is a density incentive for development that is more efficient in providing for growth and protecting open space.
- B. Community Character. The article's provisions promote flexible development by permitting all types of uses under standards that produce a uniform community character in the district.
- C. Resource Protection. The protection of natural resources and environmental systems is intended to promote clean air, clean water, groundwater recharge, and protection of wildlife habitats. It also reduces atmospheric carbon and flooding.
- D. Health and Safety. In many resource areas, development results in a threat to health and safety from flood, fire, landslides, or other threats. Health and safety are protected by avoiding development in areas of high risk.
- E. Property Rights. The rights of property owners are respected by making cluster development permitted by right, so that environmental and other public benefit requirements do not force landowners to give up density. Incentives are provided to reward developers for good design.
- F. Standards. Protection of natural resources and environmental systems is achieved by indicating the percentage of each resource on a site that must be protected. The remainder of the resource may be altered in the development process.

Section 3.102 Environmental Approach

Natural systems, upon which all life depends, involve the circulation of water, oxygen, carbon, and nutrients like nitrates and phosphorous that have been largely balanced and stable over geological time. Development destroys portions of the environment and replaces them with roads, buildings, and monocultures that alter the system's balance, with undesirable results such as flooding. Sustainability requires minimizing or eliminating these disturbances. There are three strategies for protecting the environment: avoidance, minimization, and mitigation. Avoidance is the most effective strategy because damage does not occur, but it is very difficult to achieve. Minimization is a more achievable approach, since clustering minimizes damage while allowing development to continue. It is a win-win approach for both the environment and developers. Mitigation assumes environmental damage has occurred and requires corrective measures to be undertaken to reduce adverse impacts. Mitigation occurs after the loss, so it is

limited to replacing the damaged or destroyed resource with a newly constructed substitute. The initial damage cannot be offset and, unfortunately, mitigated areas are rarely as efficient as the natural system. This LDO gives priority to avoidance and minimization to reduce the need for mitigation and increase its effectiveness. Avoidance is generally limited to resources where life and property are threatened, where, despite the developer incurring additional costs, it is predictable that damage will occur, and government will be required to provide emergency assistance. Minimization through clustering and incentives is used for most resources. Minimization is implemented by utilizing a minimum open space ratio (OSR) or percentage (Tables 3.103A–C). The use of mitigation is limited to damage to an unprotected resource.

Section 3.103 Resource Protection Standards

A site-capacity calculation (Division 3.200) requires measuring the amount of resources on a site and calculating the percentage that must be retained in open space. The protection standards in Tables 3.103A–C indicate the portion of a resource that is to be preserved as permanent open space. This is expressed as a decimal number from 0.20 to 1.00 (20 to 100 percent). The protection levels for rural, sub-urban, and urban districts differ, reflecting the varying ability to protect resources and achieve the desired development intensities.

~~A. Rural Districts. Protection levels are highest in a rural area because the district requires extreme clustering with a very high minimum of open space (Table 3.103A). Agricultural land is protected most in the AG district and least in the N district, where preserving other resources has priority.~~

~~B. Sub Urban Districts. These districts allow substantial clustering, so strong protection ratios are possible, though less so than in rural areas. They are shown in Table 3.103B.~~

~~Urban Districts. In urban areas, open space conflicts with the requirement of urban character to have a high proportion of enclosed space, so only the most vulnerable resources~~

~~C. are protected. Table 3.103C provides the urban standards.~~

Table 3.103A			
Rural Resource Protection Levels			
Natural Resource	Resource Protection Level		
	N District	AG District	CS District
Waterbodies	1.00	1.00	1.00
Floodplains	1.00	1.00	1.00
Wetlands	1.00	1.00	1.00
Riparian Buffers	0.90	0.75	0.80
Existing Agricultural Land as of Date of Adoption	0.20	0.90	0.75
Drainageway Soils	0.95	0.80	0.50
Steep Slopes (>25%)	0.98	1.00	0.75
Steep Slopes (15–25%)	0.70	0.80	0.60
Woodland, Core	0.98	0.90	0.85
Woodland, Edge	0.90	0.40	0.65
Woodland, Invasive*	0.40	0.00	0.00
Bedrock Less than 1 ft Below Surface	0.95	.60	0.60
Sinkholes and Springs	1.00	1.00	1.00
Oceanic Shoreline, Unstable	1.00	1.00	1.00

Oceanic Shoreline, Moderately Stable	1.00	0.98	0.95
Oceanic Shoreline, Stable	0.98	0.98	0.85
Slide Areas	1.00	1.00	1.00
Eagle Nest	1.00 / 0.8 / 0.6	1.00 / 0.8 / 0.6	1.00 / 0.8 / 0.6
Wellhead Protection	1.00	1.00	1.00
Historic Sites	See Division 6.600		
*If development occurs within 50 feet of these areas, they should be cleared.			

- A. Rural Districts. Protection levels are highest in a rural area because the district requires extreme clustering with a very high minimum of open space (Table 3.103A). Agricultural land is protected most in the AG district and least in the N district, where preserving other resources has priority.
- B. Sub-Urban Districts. These districts allow substantial clustering, so strong protection ratios are possible, though less so than in rural areas. They are shown in Table 3.103B.
- C. Urban Districts. In urban areas, open space conflicts with the requirement of urban character to have a high proportion of enclosed space, so only the most vulnerable resources are protected. Table 3.103 C provides the urban standards.

Table 3.103B Sub-Urban Resource Protection Levels			
Natural Resource	Resource Protection Level		
	E District	S District	All Other Districts
Waterbodies	1.00	1.00	1.00
Floodplains	1.00	1.00	1.00
Wetlands	1.00	1.00	1.00
Riparian Buffers	0.90	0.80	0.50
Drainageway Soils	0.60	0.50	0.50
Steep Slopes (>25%)	0.90	0.90	0.70
Steep Slopes (15–25%)	0.40	0.35	0.30
Woodland, Core	0.85	0.70	0.30
Woodland, Edge	0.60	0.30	0.15
Woodland, Invasive**	0.50	0.30	0.00
Bedrock Less than 1 ft Below Surface	0.90	0.40	0.20
Sinkholes and Springs	1.00	1.00	1.00
Eagle Nest	1.0 / 0.80 / 0.60	1.0 / 0.80 / 0.60	1.0 / 0.80 / 0.60
Wellhead Protection	1.00	1.00	1.00
Unstable Soils	0.95	0.90	1.00
Oceanic Shoreline, Stable	0.95	0.92	0.98
Oceanic Shoreline, Moderately Stable	0.98	0.95	1.00
Oceanic Shoreline, Unstable	1.00	1.00	1.00
Historic Sites	1.00 (also see Division 6.600)		
*For wetlands under 2 acres, see Section 5.308.			
** Mitigation required in addition, see Section 5.507			

Table 3.103C Urban Resource Protection Levels		
Natural Resource	Resource Protection Level	
	AU, U, UM, and UC Districts	All Other Districts
Waterbodies	1.00	1.00
Floodplains	1.00	1.00
Wetlands	1.00	1.00
Steep Slopes (>25%)	0.65	0.75
Steep Slopes (15–25%)	0.00	0.40
Sinkholes and Springs	1.00	1.00
Unstable Soils	1.00	1.00
Oceanic Shoreline, Stable	0.80	1.00
Oceanic Shoreline, Moderately Stable	0.90	1.00
Oceanic Shoreline, Unstable	0.98	1.00
Historic Sites	1.00 (also see Division 6.600)	

DIVISION 3.200 SITE CAPACITY

This division contains the calculations that determine the achievable site capacity, minimum OSR, and maximum intensity of development.

Section 3.201 Application

All applications for subdivisions, land development, or zoning changes shall include the following: natural resources plan or map (Section 3.202), base site area (Section 3.203), and open space determination (Section 3.204). When a property is in more than one district, the calculation shall be done separately for each district. In a single district where the development has both residential and nonresidential uses, the calculations shall be done separately. The following developments shall be exempt.

- A. Platted Lots. Platted lots subdivided and recorded prior to the date of adoption of this LDO are exempted from the calculations, and the intensity shall remain that of the platted lots. Vacant lots in wetland, floodplain, or oceanic shoreline shall not receive building permits.
- B. Infill. These are exempted from site-capacity calculations, as the existing lot is considered buildable, except a lot in wetland, floodplain or oceanic shoreline, which may not be developed. The intensity can be altered by changing the zoning.
- C. Redevelopment. Because this district was previously developed, any resource that was open space shall be preserved as open space. Where floodplain had buildings, new development should be avoided. No new construction shall be permitted where the highest point in past flooding was more than two feet. Any permitted buildings shall be elevated on stilts a minimum of two feet above the 0.002 flood elevation. Oceanic shorelines shall not be redeveloped unless protected by structures approved by the US Army Corps of Engineers that, in effect, remove them from the oceanic shoreline. The engineer shall require special engineering for all other resources where there is potential for damage to buildings or streets.
- D. Owners. Owners denied building permits in A to C may file for a beneficial use appeal (Section 16.305).

Section 3.202 Natural Resources Plan

All subdivisions, land developments, and zoning change requests shall include a natural resources plan and/or map of the site, detailing all resources identified in Section 3.103. An accompanying table shall indicate the area presently covered by each and the area of the resource that is required to be preserved. Where resources overlap, the resource with the higher OSR shall be mapped.

Section 3.203 Base Site Area

This is the portion of a site's area that has been determined by survey to be usable land. The base site area is the buildable portion of the site. Table 3.203 sets forth the steps to determine the base site area. It excludes the following areas.

- A. Roads. This is land within the current ultimate right-of-way of bordering roads. This ensures there is no development credit for the land that is in public use for roads.
- B. Utility Rights-of-Way. This is existing land devoted to above- or below-ground utilities that require access for maintenance and cannot be used for buildings.
- C. Cut-Off Land. This is land cut off from access by a railroad, limited-access road, river, wetland, or lake. Such land would be calculated separately, unless an access plan is provided by the developer.
- D. Rivers and Lakes. The land below low-water mark is not calculated.
- E. Open Space. Any land that was previously dedicated as open space is excluded as unavailable for development prior to the current proposal.

Table 3.203 Base Site Area (Example)	
Enter gross site area as determined by actual survey	100.0 ac
Subtract land within current ultimate rights-of-way of existing roads	1.8 ac
Subtract land within major utilities' rights-of-way (minimum 50-foot ROW width)	0 ac
Subtract land cut off from use by railroad, highway, river, or lakes that have no access	0 ac
Subtract all rivers or lakes	5 ac
Subtract land previously dedicated as open space	0 ac
Equals Base Site Area	93.2 ac

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Section 3.204 Required Open Space

Tables 3.103A–C contain the protection levels for the rural, sub-urban, urban, or use districts. Table 3.204 is used to determine the open space required to protect resources on the site. Recreation (F) is an option that may be required by jurisdiction. For the following example, Table 3.204 utilizes the sub-urban chart, so columns 1, 3, 4, and 5 are taken from Table 3.103B. The calculation is performed as follows.

A. Enter the base site area taken from Table 3.203.

B. Enter the acres of each resource present, calculated from a resource protection survey of the site, in column B.

Table 3.204 Required Open Space Determination (Example)					
A. Enter Base Site Area	Acres of Resource	District Protection Level			93.2
B. Resource		E	S	All Other	Protected Land (acres)
Ponds		1.00	1.00	1.00	
Floodplains	3.3	1.00	1.00	1.00	3.3
Wetlands	1.2	1.00	1.00	1.00*	1.2
Riparian Buffers		0.90	0.80	0.50	
Drainageways	6.0	0.60	0.50	0.50	3.6
Steep Slopes (>25%)	3.0	0.90	0.90	0.70	2.7
Steep Slopes (15–25%)	5.2	0.40	0.35	0.30	2.08
Woodland, Core	2.0	0.85	0.70	0.30	1.7
Woodland, Edge	8.5	0.60	0.30	0.15	5.1
Limestone	5.0	0.50	0.50	0.30	2.5
Sinkholes		1.00	1.00	1.00	
Eagle Nest*		*1.00 / 0.80 / 0.60			
C. Total Resource Protection Land	Sum of Acres of Protected Land				22.68
D. Storm Water Facilities	Enter land for detention or retention				9.3
E. Recreational Open Space	Base Site Area (A) times the share for district (Table 3.204F)				1.32
F. Total Open Space	Sum of C, D, and E above				33.30
G. Open Space %**	Total Open Space / Base Site Area				35.7%
H. Proposed Open Space %	If developer proposes a higher percentage than G above, enter here				42.8%
I. Minimum Open Space (ac)					42.8
J. Buildable Acres	Base Site Area (A) times (1 minus the greater of H and I)				61.32 ac
<i>*This apply to distances from the nest. See Section 5.415</i>					

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- C. Multiply the acres of each resource by the district protection level (columns 3, 4, or 5) and enter the total acres of protected land for each resource in column 6. {Note} The Estate district (column 3), highlighted in light orange, is used for sample calculation. Cells highlighted in blue show the result of calculations. {/Note}
- D. The sum of all acres of protected land for all resources on the site is the Total Resource Protection Land (line D).
- E. Enter land for storm water facilities (line E). For preliminary plans, enter 10 percent of the base site area. For final plans, enter actual area of facilities and their maintenance areas from the storm water facilities plan.
- F. Enter Recreational Open Space. Table 3.204F provides the standards for communities requiring buildable open space on-site.

Table 3.204F Recreation Requirement Table		
District	Acres / 1,000 people	Share of site
Rural N, AG, CS	20	0.010
E	10	0.014
S, ST	10	0.086
AU	8	0.096
U	4	0.078
UM, UC	2	0.040
Nonresidential Districts	0	0.000
These are set for the district based on Article 4.		

- G. Total the open space in D, E, and F in Table 3.204 and enter in line G above.
- H. Calculate the percentage of open space by dividing the total by the base site area.
- I. The minimum open space is the greater of line G above or the district minimum (Division 3.300).
- J. The developer may choose to protect more than the minimum open space to increase density up to the maximum open space indicated on the charts in Division 3.300. Beyond the maximum, the density will decline.

Section 3.205 Open Space Dedication

Where open space for resource protection, recreation, or other purpose is required, the developer shall provide it as private or public open space. The following shall govern that determination.

- A. The jurisdiction may decide whether to accept ownership of all or part of a donation of open space. The following criteria shall be used in making the decision.
1. Land shown on the jurisdiction's park and recreation plan shall be accepted, except as provided in 4 or 5 below.
 2. The jurisdiction shall accept land that connects to an existing greenway or links to existing parks, even if not shown on the park and recreation plan.

3. Where sites are less than 10 acres and not connected to other sites, the jurisdiction shall not accept the land unless the parks and recreation department certifies that it is highly desirable, has a specific use, and can be maintained within existing budgets.
 4. Where the jurisdiction determines that land (1, 2, or 3 above) cannot be maintained, it shall refuse to take ownership.
 5. Where projects have less than 15 dwelling units, the jurisdiction may require a fee-in-lieu in accordance with its fee schedules. Where a fee-in-lieu is accepted, the minimum required recreational open space for the development shall be subtracted, thereby lowering the minimum open (I in Table 3.204).
- B. Where the recreational land is not accepted by the jurisdiction, the developer shall provide open space and equip it for the benefit of the residents of the development.

Section 3.206 Additional Open Space Standards

Additional standards for the protection of individual resources and the use of protected areas are found in Article 5.

DIVISION 3.300 MAXIMUM RESIDENTIAL INTENSITY

Section 3.301 Standard

The maximum intensity is linked to the amount of open space required by the site-capacity calculations and the gross density shown on the charts for the district. This applies where new developments provide new streets. The formulas to calculate the density are provided in each section. Infill development and redevelopment that does not require the provision of new streets is controlled by net-net or net density. For neighborhood conservation, intensity is controlled by the lot standards in Table 4.202. Infill development is not required to provide open space or conform to the net-net density controls as per Section 3.318. Redevelopment is controlled by net density per Section 3.319.

Section 3.302 Example District Intensity Charts

The intensity for each community character district is illustrated with a chart that shows maximum permitted density as lines. Density is on the vertical axis, and open space on the horizontal axis, from 0 percent to 100 percent. A sample sub-urban chart (Figure 3.302) shows the permitted intensity for a cluster development which allows all residential types. Note that it starts with a minimum open space of 10 percent, a figure that provides land for the development's storm water management. This intensity is achieved with a single-family lot. The density increases very slowly to 30 percent open space, a desirable minimum sufficient to provide the desired character with smaller lots. An incentive is built into the chart to provide more density as more open space, up to 50 percent, is provided. This also encourages more affordable small lots or dwelling unit types. After 50 percent, density declines.

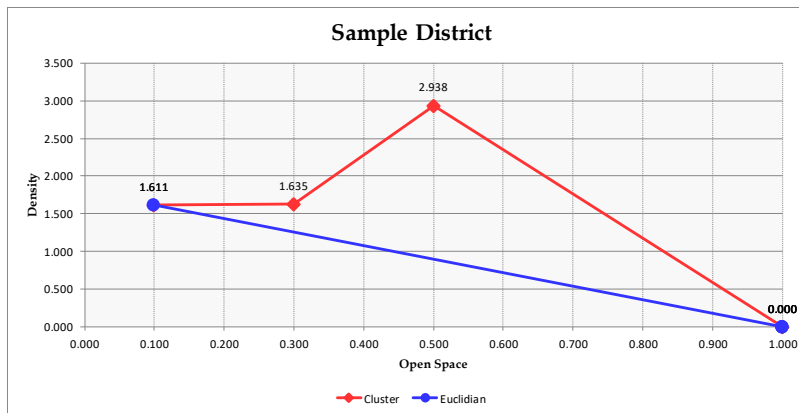


Figure 3.302

{Button}

To determine density type in proposed open space, select development option and click to determine maximum permitted density.

Open space proposed	Options C or E	Calculate
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{/Button}

- A. Flexibility. A character can be achieved either by a single-family lot or cluster development with significant common open space. In Euclidian zoning, as open space increases, density declines. The cluster approach allows the developer to use a mix of different lot sizes. For example, a developer with little required open space may use a large single-family lot with 10 percent open space to achieve 1.611 density. With up to 30 percent open space, the developer can use slightly smaller lots to a density of 1.635. Under Euclidian zoning, at 30 percent open space, density declines to 1.250.
- B. Open Space Incentive. Preservation of natural resources or open space is important to sustainability. When there is up to 50 percent open space, as seen on the chart, a density incentive increases density to a maximum of 2.938. A developer required to provide 26 percent open space can voluntarily provide up to 50 percent, increasing density. Mandatory protection of resources does not adversely affect property values. In cluster development, sites requiring up to 72 percent open space retain densities at or above the initial density of 1.611. In contrast, under Euclidian zoning, density declines to 0.500 by the same point, where there is a loss in density of 69 percent, resulting in a major change in property value.
- C. Property Rights. Cluster development respects the property rights of landowners when they are required to protect open space.
- D. Interpretation. To manually determine the density at any point along the line, see Appendix A for the formulas. In this code, there is a button (shown above) that allows one to enter the proposed open space and the density is shown. An actual manual calculation is only needed on printed versions of the codes

Section 3.303 Rural Character Districts

There are three basic rural character districts: Natural (N), Agriculture (AG), and Countryside (CS). A fourth district, Rural (R), is provided for townships or counties that want only a single district so there will be no district boundaries.

Section 3.304 Natural (N) District

Figure 3.304 provides standards for three development options: single-family, cluster, and megastructure residential uses. The formulas to calculate density are found in Appendix A

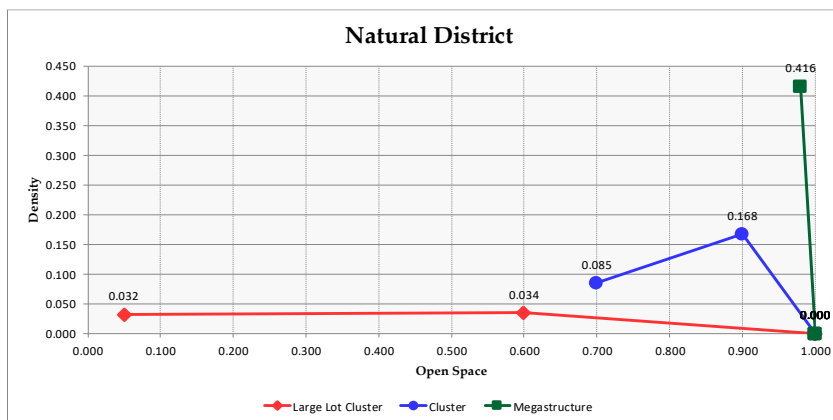
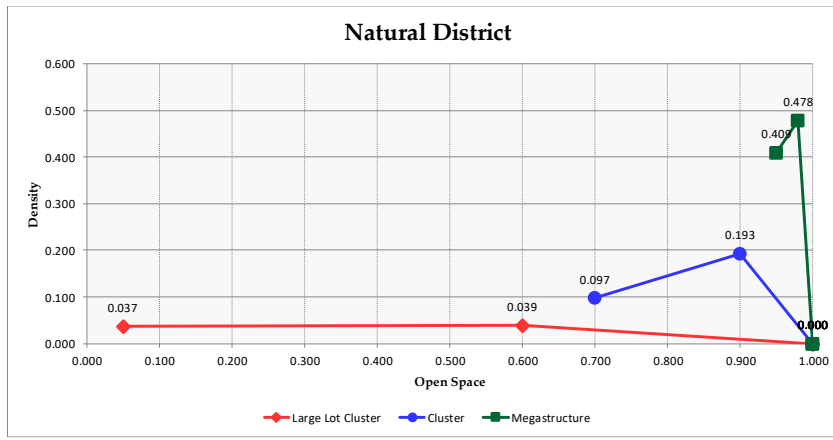


Figure 3.304

{Button}

Open space proposed	Options LL, C, M	Calculate
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{/Button}

Section 3.305 Agriculture (AG) District

Figure 3.305 provides standards for two development options: large-lot clusters using on-lot sewer and water and clusters with community water and sewer.

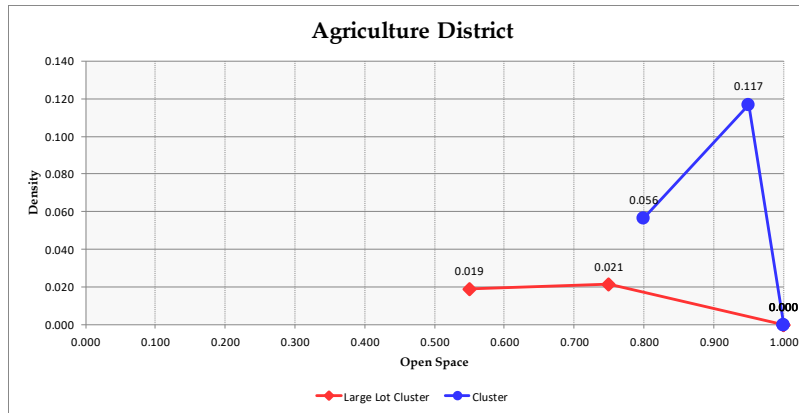


Figure 3.305

{Button}

Open space proposed	Options LL or C	Calculate
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{/Button}

Section 3.306 Rural (R) One-District Ordinance

This district provides for a one-district ordinance covering the entire jurisdiction; no other district except NC is applied only to existing development. There are five options for developers: cluster single-family with septic tanks, cluster single-family with sewer systems, hamlets, villages, and megastructures. Figure 3.306 provides density lines for each development form.

- Hamlet and Village. Both forms permit nonresidential community centers. Figure 3.306 represents the maximum densities and assumes no nonresidential uses.
- Maximum Dwellings. The OSRs control both residential and nonresidential development. Plans must show the percentage of residential and nonresidential uses. If a percentage of the developable land is planned for nonresidential uses, the densities in the chart apply only to the land allocated to residential uses. For example, if 10 percent of a hamlet is planned for nonresidential uses, then the maximum total units shall be reduced by 10 percent.

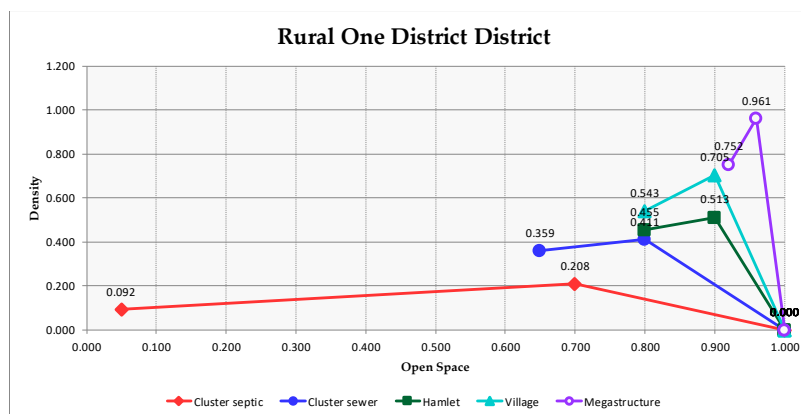


Figure 3.306

{Button}

Open space proposed	Options CS, C, H, V, M	Calculate
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{/Button}

C. Center Nonresidential. Nonresidential development is controlled by Section 3.403. Mixed uses are permitted but use a proportional share of the buildable land per B above.

Section 3.307 Countryside (CS) District

Only cluster development is permitted in this district, as shown in Figure 3.307. There must be at least 40 percent open space for cluster development, and density incentives begin at 75 percent open space.

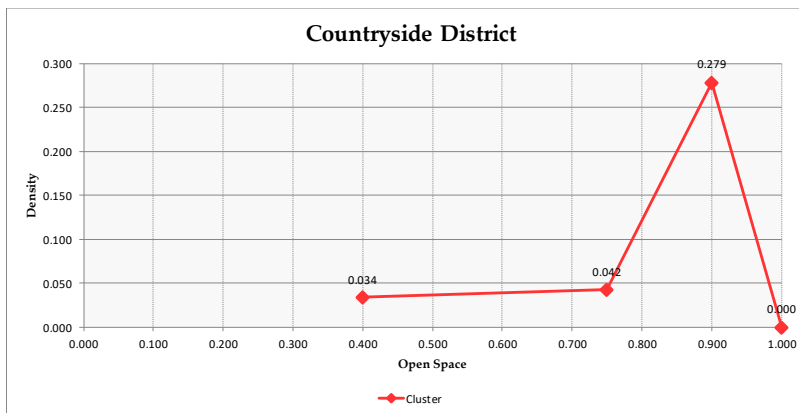


Figure 3.307

{Button}

Open space proposed	Calculate
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{/Button}

Section 3.308 Sub-Urban Districts

The two basic sub-urban character districts are Estate (E) and Suburban (S). An additional district provides for two transition areas. The Suburban Transition and Transit (ST) district is intended to increase intensity near more intense districts, existing commercial areas, or at rapid transit stops.

Section 3.309 Estate (E) District

This district permits only cluster residential development in order to provide the desired character, as indicated in Figure 3.309. The cluster starts at 10 percent open space, rises slowly to 40 percent, then rises more quickly to 75 percent open space before dropping again.

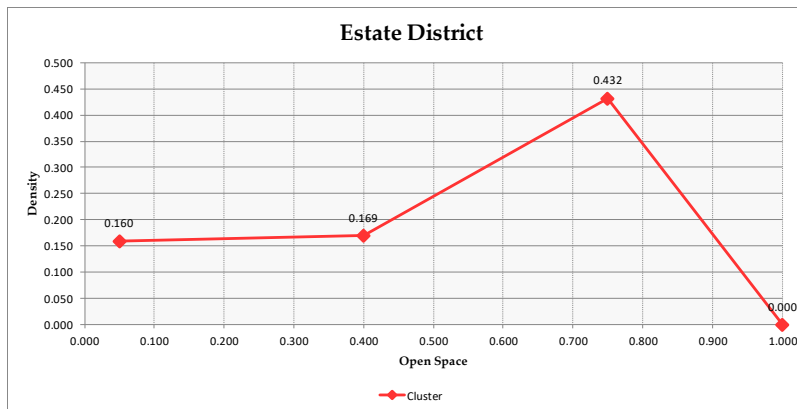


Figure 3.309

{Button}

Open space proposed	Calculate
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{/Button}

Section 3.310 Suburban (S) District

This district permits only cluster residential development. Figure 3.310 shows clusters beginning at 10 percent open space, rising slightly to 30 percent, then reaching a maximum density incentive at 50 percent.

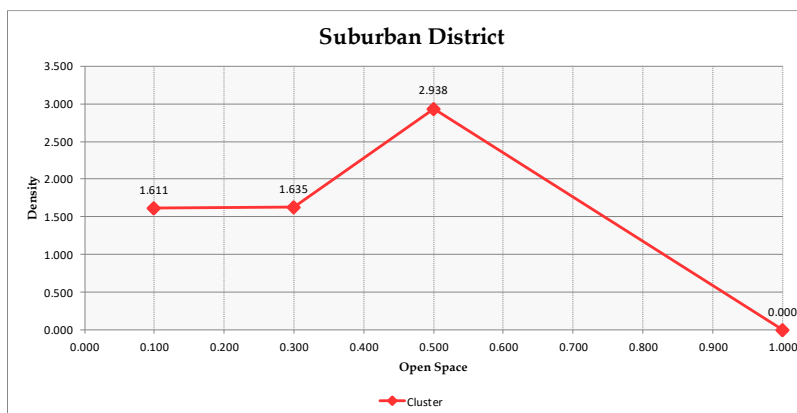


Figure 3.310

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Open space proposed	Calculate
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Section 3.311 Suburban Transition (ST) District

{Sidebar}

This district is an alternative to the S district, for use where higher intensities are desired to increase walkability and transit use. This option should be used where there are rail or express bus transit stations.

{/Sidebar}

This district adds a transition overlay that provides an increased density in areas within 300 feet of existing commercial development of at least 20 acres, or along the boundary with the AU or U districts. The transition permits increased density to encourage more walking or bicycle trips. A second, more intense transition is permitted on parcels within 1,320 feet of rail transit stops. This promotes increased density by encouraging more people to live where they can walk to transit stations, reducing congestion on highways. Both are cluster developments, permitting all housing types. Controls for these uses are illustrated in Figure 3.311.

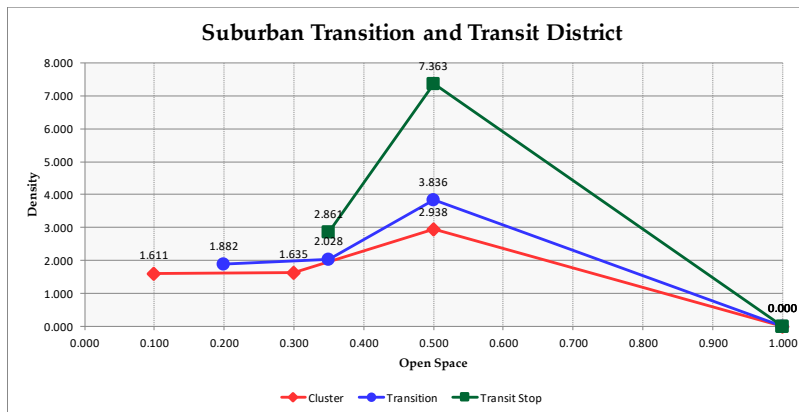


Figure 3.311{Button}

Open space proposed	Options C, T, TS	Calculate
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{/Button}

Section 3.312 Urban Districts

his section controls the intensity of urban character districts: Auto-Urban (AU), Auto-Urban Multifamily (AUM), and Urban (U). These are intended for greenfield development, where developers build subdivisions or land developments, providing streets, open space, and, in some cases, alleys. In cities and areas that are mature, development primarily occurs on land that was subdivided so development is redevelopment. Section 3.318 controls infill development, except in the NC district, which is governed by Table 4.202. Section 3.319 controls redevelopment.

Section 3.313 Auto-Urban (AU) District

This district allows cluster development that can be met by single-family and attached single-family dwelling unit types. The chart in Figure 3.313 controls the intensity.

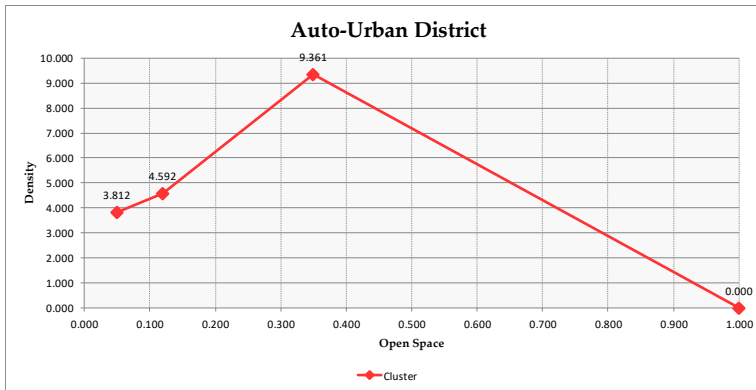


Figure 3.313

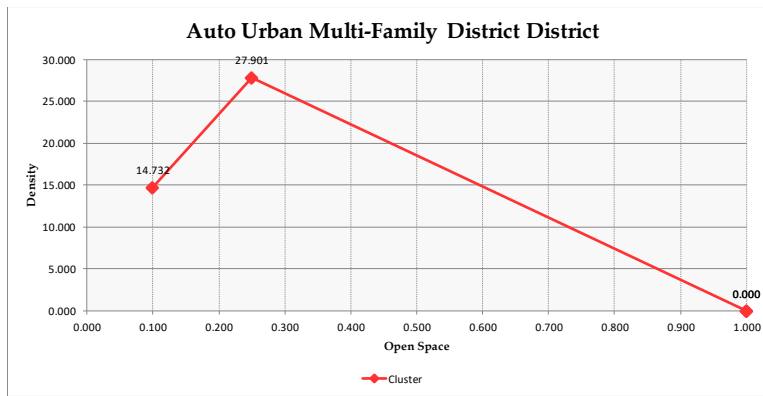
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Open space proposed	Calculate
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{/Button}

Section 3.314 Auto-Urban Multifamily (AUM) District

This district is based on multifamily units with different heights. While all housing types are permitted, the densities in Figure 3.314 can only be achieved with multifamily or mixed housing types.



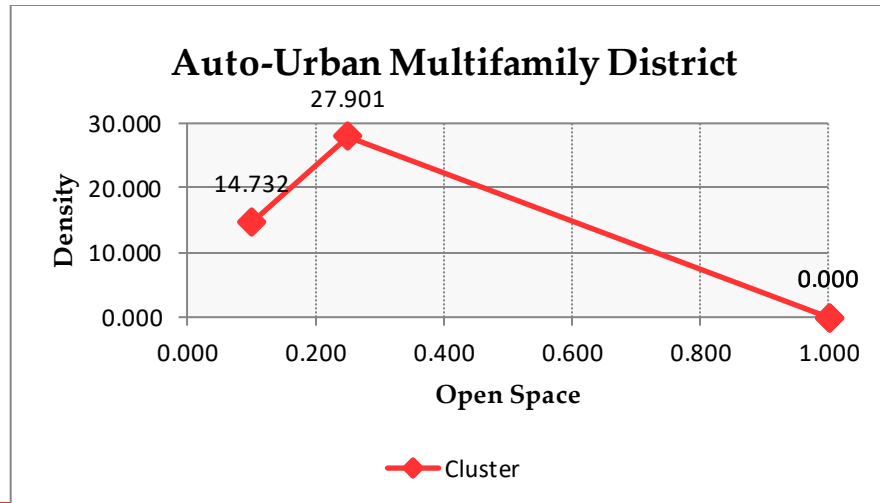


Figure 3.314

{Button}

Open space proposed	Calculate
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{/Button}

Section 3.315 Urban (U) District

This district's residential density provides for a cluster development using single-family or attached housing types as shown in Figure 3.315. Multifamily housing intensities are not shown, as they require structured parking and are governed by floor area ratio (FAR), not density. See Section 3.407. This is because density is so sensitive to unit floor area and mixed use that it is not a useful measure. Alleys are required to provide parking access for individual units. Where structured parking is under the building, access is permitted from a street or alley.

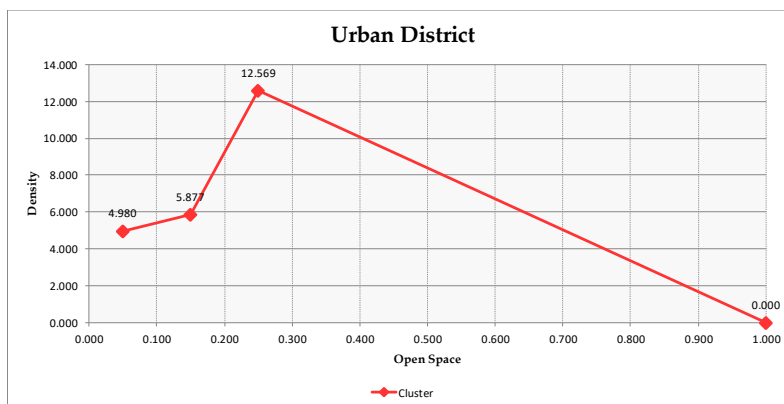


Figure 3.315

{Button}

Open space proposed	Calculate
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{/Button}

Section 3.316 Small-Family Development

Small-family housing types (Sections 4.302–4.303) are for one-bedroom dwellings designed for small families and affordable housing. The units are limited in location and the maximum number of units on a site is detailed in Section 2.303 G (R, S, and U). The maximum intensity is not governed by the district charts in Sections 3.304–3.315, but by this section, providing a density bonus or incentive to use these types.

- A. Rural Districts. Small-family units are permitted only on a lot in a hamlet or village.
- B. Maximum Units On-Lot. The maximum number of units is determined by how many of a type can be placed on the lot and provide the required open space. Since the three types have different lot areas, the densities depend on the type selected and the ability to place the units on the site.
- C. Open Space. In general, existing lots will not have any natural resources on them. If a site has natural resources, then the minimum open space shall be calculated (Section 3.204). If there are no natural resources, the following open space minimums shall be provided.
 - 1. Estate (E): 35 percent.
 - 2. Suburban (S): 25 percent.
 - 3. Auto-Urban (AU): 15 percent.
 - 4. Urban (U): 5 percent.
- D. Housing Type in Larger Development. Small-family units may be used as a housing type in a normal development. Each small unit shall count as one-half of a dwelling unit.
- E. Affordable Unit. Where permitted as an affordable dwelling unit by the housing agency, a small unit shall count as one-third of a dwelling unit.

Section 3.317 Infill Development

Infill development involves the residential redevelopment of up to eight contiguous existing platted lots or 45 percent of a block, whichever is lower (Figure 3.317). In NC districts, infill development shall be governed by the lot size (Table 4.202). In the S, AU, or U districts, a maximum net-net density is used, and no open space is required. The net-net density may be greater than the existing lots to encourage walkability. Table 3.317 indicates the net-net density and the dwelling unit type that achieves this. The developer is not required to use this type but can use any dwelling unit type in Article 4. The choice of a less dense unit type is permitted but will not achieve the maximum density. A denser type may be selected but maximum density controls, so the choice will result in open space. A mix of types is also permitted. Any open space provided shall be located adjacent to existing dwellings on the block to serve as a buffer.

Table 3.317 Infill Development		
District	Maximum	
	Net-Net Density	Dwelling Unit Type / Lot Size
Suburban (S)	4.536	Single-family / 10,000 sf
Auto-Urban (AU)	21.780	Duplex / 4,000 sf

Urban (U)	43.560	Fourplex / 4,000 sf
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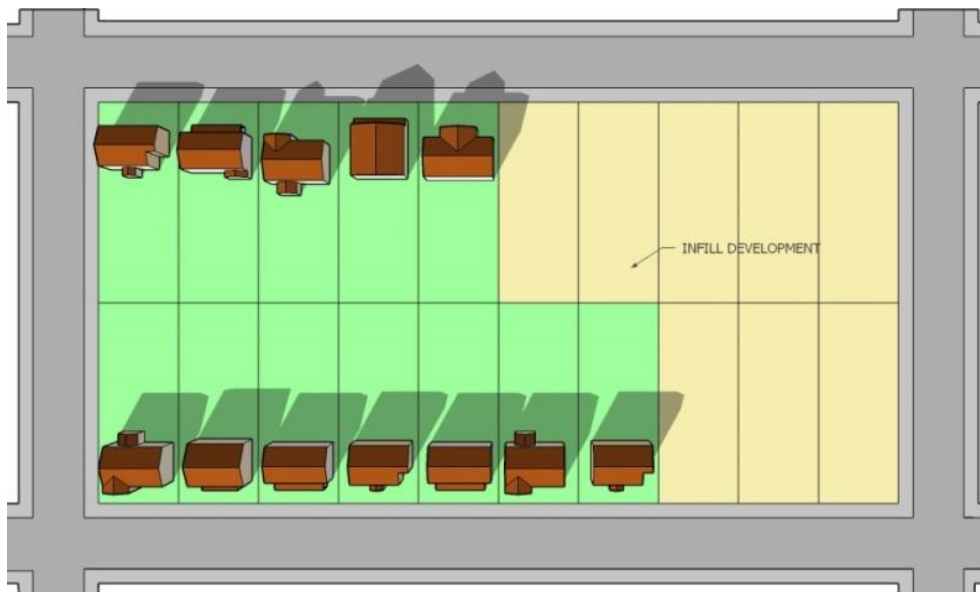


Figure 3.317 Infill development is the redevelopment of eight contiguous existing lots (tan) on a portion of a block.

Section 3.318 Redevelopment

Redevelopment is the development of new dwellings on an area of two or more contiguous existing blocks. It is regulated by both net density and a minimum OSR. Redevelopment sites are already served by streets, so the net density provides for lots and the required open space. Table 3.318 and standards below apply to S, AU, U, and RD districts. The example column indicates the housing type that was used to develop the standard.

Table 3.318 Redevelopment Intensity				
District	Maximum Net Density	Minimum Open Space Ratio	Maximum Height (Stories)	Base Housing Type
Suburban	3.110	0.25	2	10,000 sf
Auto-Urban	14.416	0.15	3	Townhouse 2,500 sf
Urban	16.140	0.12	4	Duplex 4,000 sf
Urban Transit Corridor	25.402	0.10	8	Triplex 4,000 sf

- A. Dwelling Unit Types. Any dwelling unit type in Article 4 is permitted, subject to the maximum height in stories in Table 3.318.
- B. Areas. To qualify for redevelopment, the developer must have the minimum area specified below.
 1. Suburban (S): A minimum of two or more blocks.
 2. Auto-Urban (AU): A minimum of two or more blocks.
 3. Urban (U): A minimum of four or more blocks.
 4. Fractional blocks: If there is an alley, it shall separate the redevelopment area. Without an alley, the contiguous lots shall constitute 50 percent or more of the block.

5. Urban Transit Corridors: The minimum area is a whole block where at least 35 percent of the block is within 1,320 feet of the station. Maximum height is limited in Table 3.318.
- C. Urban Transit Corridors. The corridor shall have bus or trolley service with stops at least every two blocks to qualify for this redevelopment.

DIVISION 3.400 NONRESIDENTIAL DEVELOPMENT

Section 3.401 Nonresidential Intensity

Nonresidential development is permitted in all community character districts per Sections 3.402–3.409. Use districts, such as office, are controlled by Sections 3.410–3.414. The site-capacity calculation (Division 3.200) sets a minimum OSR. The overall intensity of nonresidential developments has two components: the preservation of open space and intensities on lots. The interaction of these is governed as follows.

- A. Development Intensity. The development must provide the minimum open space which can be preserved as common open space or deed-restricted landscaped surfaces on the individual lot. The extent to which open space can be preserved on individual lots ultimately determines the total common open space area. A developer can choose to have common open space, which reduces the area available for lots, or open space may be preserved on lots where there is a property owners' association that is responsible for the protection and maintenance of protected open space.
- B. Lot Intensity. The intensity on nonresidential lots is controlled by three standards: a maximum FAR, maximum height, and minimum landscape surface ratio (LSR). Maximum floor area on the lot is calculated by multiplying the lot area (excluding any protected resources) by the FAR. In the S and AU districts, an incentive is provided for some uses that provide structured parking and a higher LSR. In the U, UM, and UC districts, a minimum FAR applies as well as the maximum FAR. This is done to prohibit the development of auto-urban character uses that do not have the desired intensity.
- ~~C. Review.~~ The planning director shall review plans where open space is to be preserved on lots in order to ensure such open space can be protected during construction. A fence shall be erected 10 feet from the protected area to serve as barrier. An additional setback of 10–40 feet shall be required for equipment movement necessary during construction. This will be determined in consultation with the ~~engineer to ensure protection.~~

~~D.C.~~

Section 3.402 Rural Districts

In the N, AG, and CS districts, nonresidential development is encouraged in hamlets or villages (Section 3.403). For any other nonresidential development that is permitted the standards of this section control. Table 3.402 provides LSR, FAR, and height standards for all uses.

Table 3.402 Nonresidential Intensity Standards N, AG, CS, R Districts			
Use	LSR	FAR	Maximum Height (ft)
Agriculture	0.98	0.008	80
Institutional	0.50	0.262	35
Commercial and Service	0.20	0.333	50
Commercial Lodging	0.20	0.291	50
Office	0.20	0.476	50
Recreation and Amusement, Indoor	0.20	0.385	40
Recreation and Amusement, Outdoor	0.95	0.006	45
Industry	0.20	0.559	80
Mining*	0.70	0.152	80
Special	0.15	As per approved plan	
*Open-pit mining permits the pit and working piles within the LSR, and landscape buffers are determined by bufferyard requirements.			

Section 3.403 Hamlets and Villages

{Sidebar}

Hamlets or villages are an extreme form of clustering, where nonresidential uses are permitted only in the central area of the development (Division 11.200). Section 3.306 sets the total open space for hamlets or villages. The nonresidential use is determined in the plan, and the lot intensity is governed by this section and applies only to land within the central area. The overall development must meet the open space requirements in Table 3.402.

{/Sidebar}

Outdoor recreational uses may be in the hamlet or village development areas or in surrounding rural land. The landscaped areas of outdoor recreation uses count as open space. These are large-scale developments that can have a wide range of nonresidential uses. Two standards are provided: one for hamlets or villages with a suburban character, and one for those with an urban character.

- A. Low Intensity. The standards in Table 3.403A provide a more suburban character, where most uses are on individual lots. At-grade parking is used.
- B. High Intensity. This assumes most uses have structured parking and are grouped in blocks. Table 3.403B provides the standards.

Table 3.403A Nonresidential Intensity Standards Hamlet or Village Centers with Suburban Character			
Use	LSR	FAR	Maximum Height (ft)
Institutional	0.30	0.452	40
Commercial and Service	0.20	0.381	50
Commercial Lodging	0.20	0.455	45
Heavy Commercial (Village Only)	0.25	0.272	40
Office	0.20	0.521	50
Mixed Uses*	0.20	0.595	50
Recreation and Amusement, Indoor	0.20	0.507	40
Recreation and Amusement, Outdoor	0.90	0.013	45
Industry (Village Only)	0.25	0.559	45
*Residential is regulated as part of the mixed-use FAR, not density.			

Table 3.403B Nonresidential Intensity Standards Hamlet or Village Centers with Urban Character			
Use	LSR	FAR	Maximum Height (ft)
Institutional	0.20	0.554	40
Commercial and Service	0.10	0.673	50
Commercial Lodging	0.10	0.731	45
Heavy Commercial (Village Only)	0.25	0.278	40
Office	0.10	0.811	50
Mixed Uses*	0.10	0.981	50
Recreation and Amusement, Indoor	0.20	0.507	40
Recreation and Amusement, Outdoor	0.90	0.013	45 ft
Industry (Village Only)	0.20	0.559	45
*Residential is regulated as part of the mixed-use FAR, not density.			

Section 3.404 Estate (E) District

In this district, nonresidential uses are controlled by the standards in Table 3.404. Where a parcel meets the locational criteria for nonresidential uses (Table 2.204), these standards apply. Commercial lodging, office, and mixed uses have two intensity levels. The second requires structured parking to achieve the maximum floor area and requires more landscaped area as surface parking is reduced.

Table 3.404 Nonresidential Intensity Standards Estate District			
Use	LSR	FAR	Maximum Height (ft)
Institutional	0.70	0.157	40
Commercial	0.65	0.146	35
Commercial Lodging	0.65	0.248	50
Commercial Lodging w/Structured Parking	0.70	0.371	62
Office	0.65	0.208	50
Office w/Structured Parking	0.70	0.270	62
Mixed Uses*	0.65	0.204	55
Mixed Uses w/Structured Parking	0.70	0.377	65
Recreation and Amusement, Indoor**	0.65	0.169	40
Recreation and Amusement, Outdoor	0.95	0.006	20
Heavy Commercial	0.70	0.109	52
Industry	0.70	0.210	27
*Residential is regulated as part of the mixed-use floor area, not density.			
**Gymnasiums, theaters, and pools are permitted to be 50 feet high.			

Section 3.405 Suburban (S) and Suburban Transition (ST) District

Nonresidential uses in this district are controlled by the standards in Table 3.405. Where a parcel meets the locational criteria for nonresidential uses (Table 2.204), these standards apply. Note that these would not apply to any use district within a community that has a suburban character. Different intensities are provided for developments using structured parking with more open space. In the ST district, the grade-separated pedestrian precinct (Division 11.500) may be used, and the area used in calculating floor area includes any street area under an elevated pedestrian precinct.

Table 3.405 Nonresidential Intensity Standards Suburban District			
Use	LSR	FAR	Maximum Height (ft)
Institutional	0.60	0.254	45
Commercial and Service	0.55	0.187	35
Commercial Lodging	0.55	0.256	50
Commercial Lodging w/Structured Parking	0.60	0.459	65
Office	0.55	0.297	50
Office w/Structured Parking	0.60	0.465	65
Mixed Uses*	0.55	0.340	55
Mixed Uses* w/Structured Parking	0.60	0.566	70

Recreation and Amusement, Indoor**	0.55	0.200	40**
Recreation and Amusement, Outdoor	0.90	0.018	45
Intensive Commercial	0.60	0.145	40
Industry	0.60	0.279	45
*Residential is regulated as part of the mixed-use floor area, not density.			
**Gymnasiums, pools, and theaters are permitted up to 50 feet high.			

Section 3.406 Auto-Urban (AU) District

Nonresidential development intensity in this district is driven by the use of at-grade parking and modest LSRs. The development shall meet the standards in Table 3.406.

Table 3.406 Nonresidential Intensity Standards Auto-Urban District			
Use	LSR	FAR	Maximum Height (ft)
Institutional	0.25	0.536	50
Commercial and Service	0.20	0.460	45
Commercial Lodging	0.20	0.456	50
Commercial Lodging w/ Structured Parking	0.25	0.764	65
Office	0.20	0.528	55
Office w/Structured Parking	0.25	0.926	75
Mixed Uses*	0.20	0.544	75
Mixed Uses w/Structured Parking	0.25	0.618	75
Recreation and Amusement, Indoor**	0.20	0.510	50
Recreation and Amusement, Outdoor	0.90	0.022	50
Intensive Commercial	0.25	0.272	50
Industry	0.25	0.229	60
*Residential is regulated as part of the mixed-use floor area, not density.			
**Gymnasiums, pools, and theaters are permitted to be up to 50 feet high.			

Section 3.407 Urban (U) District

In addition to the maximum FAR, a minimum FAR applies. This is done to avoid the building of new uses that utilize surface parking, resulting in an auto-urban rather than urban character. The following standards apply.

- A. Minimum FAR. The minimum FAR can only be achieved with multistory buildings that have structured parking. There is an exception to the minimum FAR requirement for traditionally one-story buildings, as listed in B below.
- B. Single-story buildings. Several uses that are normally conducted in single-story buildings are permitted to remain one story and continue to use surface parking. These uses include gas stations and

fast food restaurants. Supermarkets, building supply, and automobile dealers should provide structured parking but if the planning director finds that the proposed building is adjacent to the edge of the district, a one-story building may be permitted, provided it has an LSR of 0.20 and joins a special taxing district for a public parking structure.

- C. Where the grade-separated pedestrian precinct (Division 11.500) is used, the area used in calculating floor area includes any street area under an elevated pedestrian precinct.

Table 3.407 Nonresidential Intensity Standards Urban District				
Use	Minimum		Maximum	
	LSR	FAR	FAR	Height (ft)
Institutional	0.00	0.800	1.629	70
Commercial and Service	0.00	0.800	1.074	75
Commercial Lodging	0.00	1.000	1.518	115
Heavy Commercial	0.00	0.550	0.684	60
Office	0.00	1.000	1.743	115
Mixed	0.00	1.000	2.067	115
One-Story	0.10	NA	0.200	30
Recreation and Amusement, Indoor	0.00	NA	1.177	80
Recreation and Amusement, Outdoor	0.85	NA	0.190	50
Industry	0.10	1.000	1.899	80

Section 3.408 Urban Mid-Rise (UM)

Most uses will be in mixed-use structures. Four use mixes are provided, primarily residential, office, and hotel, with a fourth that is more heavily commercial but contains at least 25 percent residential area. There are no setbacks and the minimum LSR is 0.00. A maximum and minimum FAR are provided to ensure no new buildings having less than the desired character are constructed. Because parking varies with the mix of uses, the FAR excludes the parking structure floor area. Table 3.408 is set up for a street-level development. A design with an above-street-level pedestrian precinct is strongly encouraged. This requires parking floors below the pedestrian precinct, and the maximum height shall be increased to account for these levels. Because there are floors above grade-level streets, the maximum floor area shall be calculated to include roads that are under the pedestrian precinct, which increases the potential floor area.

Table 3.408 Urban Mid-Rise Development Standards				
Use	15 Leasable Floors		35 Leasable Floors	
	Minimum FAR	Maximum FAR	Minimum FAR	Maximum FAR
Residential	2.00	5.649	7.00	12.629
Office	1.50	3.059	4.00	6.842

Hotel	1.50	2.928	4.00	7.196
Commercial	1.60	3.460	4.10	7.506
Maximum Height	220 ft		490 ft	

Section 3.409 Urban Core (UC) District

Most uses will be in mixed-use structures. Four use mixes are provided, primarily residential, office, and hotel, with a fourth that is more heavily commercial but contains at least 25 percent residential area. There are no setbacks and the minimum LSR is 0.00. A maximum and minimum FAR are provided to ensure no new buildings having less than the desired character are constructed. Because parking varies with the mix of uses, the FAR excludes the parking structure floor area. Where the grade-separated pedestrian precinct (Division 11.500) is used, the area used in calculating floor area includes any street area under an elevated pedestrian precinct. Table 3.409 provides the maximum intensity for urban core development.

Table 3.409 Urban Core Development Standards				
Use	15 Leasable Floors		35 Leasable Floors	
	Minimum FAR	Maximum FAR	Minimum FAR	Maximum FAR
Residential	2.00	5.649	7.00	12.629
Office	1.50	3.059	4.00	6.842
Hotel	1.50	2.928	4.00	7.196
Commercial	1.60	3.460	4.10	7.506
Maximum Height	220 ft		490 ft	

Section 3.410 Business Park (BP) District

The BP district permits a limited number of nonresidential uses. The LSR, floor area, and height standards (Table 3.410) provide for BP districts with a suburban, auto-urban, and urban character.

Table 3.410 Business Park District			
Character Use	Minimum LSR	Maximum FAR	Maximum Height (ft)
Suburban Character			
Office	0.50	0.362	75
Commercial Lodging	0.50	0.299	65
Service	0.55	0.278	36
Mixed Uses	0.50	0.352	75
Light Auto Service	0.50	0.194	25
Restaurants	0.50	0.146	30
Auto-Urban Character			
Office	0.20	0.580	75
Commercial Lodging	0.20	0.493	75
Service	0.20	0.460	35
Mixed Uses	0.20	0.564	85
Light Auto Service	0.20	0.311	30
Restaurants	0.20	0.233	30
Urban Character			
Office	0.00	0.833	120
Commercial Lodging	0.00	0.849	120
Service	0.00	0.748	85
Mixed Uses	0.00	1.430	120
Light Auto Service	0.10	0.570	40
Restaurants	0.00	0.212	40

Section 3.411 Office (O) District

The O district permits a limited number of nonresidential uses. The LSR, floor area, and height standards (Table 3.411) provide for O districts with a suburban, auto-urban and urban character.

Table 3.411 Office District			
Character Use	Minimum LSR	Maximum FAR	Maximum Height (ft)
Suburban Character			
Office	0.50	0.362	75
Commercial Lodging	0.50	0.299	65
Mixed Uses	0.50	0.352	75
Restaurants	0.50	0.146	30
Auto-Urban Character			
Office	0.20	0.580	75
Commercial Lodging	0.20	0.493	75
Mixed Uses	0.20	0.564	85
Restaurants	0.15	0.233	40
Urban Character			
Office	0.00	0.833	120
Commercial Lodging	0.00	0.849	120
Mixed Uses	0.00	1.430	120
Restaurants	0.00	0.212	40

Section 3.412 Industrial (I) District

The I district permits industrial uses and some commercial uses that provide services to workers to reduce travel. Table 3.412 provides standards for I districts with a suburban, auto-urban, and urban character. “Retail and Restaurants” covers all commercial uses permitted in the district per Article 2. “All Other” includes disposal, extraction, and regional utilities. Industrial uses allow a percentage of the site to be used for exterior storage. Exterior storage is optional, and the FAR will be reduced if a developer provides it.

Table 3.412 Industrial District				
Character Use	Minimum	Maximum		
	LSR	FAR	Height (ft)	Exterior Storage Ratio
Suburban Character				
Office	0.50	0.362	75	0
Commercial Lodging	0.50	0.299	65	0
Light Industry	0.55	0.314	35	0.10
Heavy Industry	0.55	0.327	50	0.15
Warehousing	0.60	0.348	60	0.15
Light Auto Service	0.50	0.194	30	0
Retail and Restaurants	0.50	0.208	30	0
Waste Handling	0.50	0.300	50	0
Auto-Urban Character				
Office	0.20	0.528	45	0
Commercial Lodging	0.20	0.456	45	0
Light Industry	0.20	0.559	50	0.10
Heavy Industry	0.20	0.613	45	0.20
Warehousing	0.20	0.619	50	0.15
Light Auto Service	0.15	0.330	35	0
Retail and Restaurants	0.15	0.248	35	0
Waste Handling	0.20	0.559	50	0
All Other	0.20	0.100	50	0.30
Urban Character				
Office	0.10	0.595	50	0
Commercial Lodging	0.10	0.513	50	0
Light Industry	0.10	0.629	55	0.20
Heavy Industry	0.10	0.735	55	0.25
Warehousing	0.10	0.636	55	0.20
Light Auto Service	0.10	0.330	35	0
Retail and Restaurants	0.10	0.262	30	0
Waste Handling	0.10	0.629	50	0
All Other	0.10	0.100	30	0.60
*The portion of the lot that can be devoted to exterior storage				

Section 3.413 Heavy Industry (HI) District

The HI district has a limited number of uses and Table 3.413 provides standards for those with an auto-urban and urban character. Industrial uses allow a percentage of the site to be used for exterior storage. Exterior storage is optional, and the FAR will be reduced if a developer provides it.

Table 3.413

Heavy Industry District				
Character Use	Minimum	Maximum		
	LSR	FAR	Height (ft)	Exterior Storage Ratio
Auto-Urban Character				
Light Industry	0.20	0.367	50	0.20
Heavy Industry	0.20	0.572	80	0.30
Warehousing	0.20	0.619	50	0.20
Light Auto Service	0.15	0.330	35	0.15
Restaurants	0.15	0.248	35	0
Waste Handling	0.20	0.367	40	0
Urban Character				
Light Industry	0.05	0.664	70	0.20
Heavy Industry	0.05	0.776	100	0.35
Warehousing	0.05	0.735	70	0.20
Light Auto Service	0.10	0.330	35	0
Restaurants	0.10	0.262	30	0
Waste Handling	0.05	0.664	70	0
*The portion of the lot that can be devoted to exterior storage				

Section 3.414 Other Districts

{Side bar}

There are many other possible districts but as these are all highly specialized districts and need to be tailored to local conditions no tables have been created for them. The points below provide some guidance as to how standards might be developed.

- A. Use. These need to be tailored to the districts purpose.*
- B. FAR. Look to standards of the desired character in the other districts.*
- C. Height. Determine maximum desired height and, in some cases, such as an airport control tower, exceptions may be required.*
- D. LSR. This is highly variable, and one needs to determine how to treat activities like mining, campuses, or airports in determining the LSR.*

{Sidebar}

PERFORMANCE ZONING MODEL LAND DEVELOPMENT ORDINANCE

ARTICLE 4 BULK AND LOT STANDARDS

DIVISION 4.100 PURPOSE

Section 4.101 Purpose

The purpose of this article is to provide lot and bulk standards to control the placement of the building, ensuring adequate light, air, and yard or outdoor space for each housing type. Lot standards include minimum yards or setbacks from the lot lines. The bulk regulations control the height and floor area of the building, which impacts shading and visual bulk. Lot and bulk standards regulate the dwelling type, not the intensity. Because all dwelling types are permitted in the district, density can be achieved using a range of them. The exceptions to this are single-family developments with fixed lot standards, and Neighborhood Conservation (NC) districts where standards match existing development. Intensity is controlled by Article 3. The housing palette provides a wide range of housing types to allow market flexibility to meet housing needs and the constraints of individual properties.

Section 4.102 Housing Palette

The housing palette describes all available housing types. There are three development forms: single-family, cluster, and hamlet and village. Cluster development permits all the housing types in the palette except mid- and high-rise buildings, which are permitted only in UM and UC districts.

- A. Housing Palette. Housing types are divided into six categories: single-family, two-family, attached single-family, multifamily, high-rise mixed-use, and small-unit housing. There are several types within each category, as shown in Table 4.102.
- B. Standards. Regulation of residential area and bulk includes a variety of standards. All have minimum lot areas and yards (street, side, rear) and maximum height. Minimum yards can be zero (0.0). Lot-line, patio, atrium, and some townhouses have standards unique to the design of the type.

Table 4.102 Housing Palette			
Categories of Housing	Housing Types	Control	Comments
Single-Family	Single- family, detached, lot-line, patio	Lot Area	Cluster (all types permitted) Single-family districts (only 1 size permitted)
Two-Family	Twin, duplex, carriage house	Lot Area	All permitted in cluster
Attached Single-Family	Atrium, townhouse, weak-link, roof deck, structured	Lot Area	All permitted in cluster
Multifamily	Triplex, duplex townhouse, multiplex, apartments	Lot Area or FAR	All permitted in cluster
Mid- and High-Rise	Low-, mid-, and high-rise apartments, mixed-use buildings	FAR	Permitted only in UM and UC districts

Small-Unit Housing	Single-family, atrium, bungalow, cottage, apartments	Lot Area	See Section 4.302
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Table 4.102 is a standard format where there is only a single subtitle line

Cluster. All housing types are permitted in cluster, hamlet, or village development forms. These forms must also meet the multiple lot-size requirements of Section 4.103. Multifamily unit size is controlled by Section 4.104. Development forms having more than 100 dwelling units must provide a mix of housing types (Section 4.105).

- C. Hamlet and Village. This form is similar to cluster, except that nonresidential is permitted in the development.
- D. Neighborhood Conservation (NC) District. This district is controlled only by lot size or use (Section 4.202). It is for existing platted developments, not new development.
- E. Single-Family. This development form, where permitted in Article 2, is limited to the lot size that matches the density. The multiple lot-size requirements of Section 4.203 also apply.

Section 4.103 Multiple Lot Size

Multiple lot-size requirements apply to all housing types except single-family lots of 20 acres or more and multifamily units controlled by FAR. Each housing type must have small, average, and large lots. This ensures greater housing price diversity, making the provision of affordable housing more attainable, and providing more diversity. It also eliminates the monotony of production housing by altering size and bulk, and by introducing more floor plans. The lots are designed to have the same depth. The following standards apply.

- A. Distribution. Each block face or cul-de-sac face must have all three lot sizes (Figure 4.103A).



Figure 4.103A Three lot sizes (large, small, and average) on a block face

- B. Floor Plans. Each lot size shall have a distinct floor plan that is matched to the lot width of that size. A floor plan for one lot size may not be used in another size category. Building widths should vary to reflect frontage differences (Figure 4.103B).

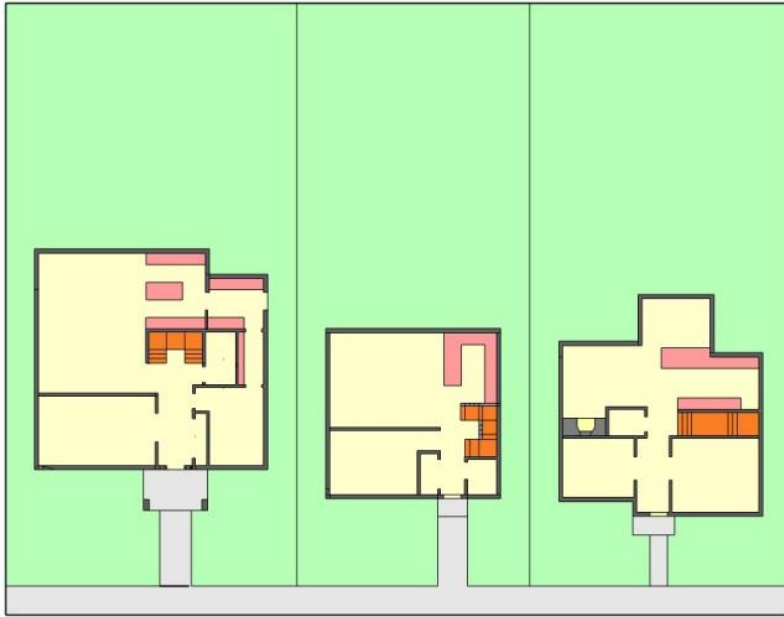


Figure 4.103B Different floor plans and building widths

- C. Percentage. A minimum percentage of the total units is required for average and small lots, 50 and 25 percent, respectively. The remaining lots shall be large lots.
- D. Materials. The exterior materials for all three sizes shall be consistent. Where a different façade treatment is used to provide increased variety, it shall be applied to all three sizes.

Section 4.104 Multifamily Mix

All multifamily buildings with more than 20 units shall provide a mix of bedroom options. Where a complex has multiple buildings, the mix shall be determined by project size. Section 6.204 contains additional affordable housing requirements.

Table 4.104 Multifamily Unit Mix				
Unit Type	Minimum Size or Range (sf)	Percent of Units in Building		
		20-99 units	100-220 units	More than 220 units
4+ Bedrooms	1,600	Remainder	Remainder	Remainder
3 Bedrooms	1,100	20%	20%	20%
2 Bedrooms	850	50%	45%	40%
1 Bedroom	600	20%	20%	15%
Efficiency	400-650	Remainder	5%	10%
Small Unit	175-250	*	Remainder*	5%*
*The housing authority must find that there is a need for these small units and approve the number to be provided.				

Tables 4.104, 4.105, and 4.202 indicate the format for tables with three title lines.

Section 4.105 Mix of Housing Types

Large developments (those with more than 50 in rural districts or 100 dwelling units in suburban and urban) require a mix of different dwelling unit types to provide a real variety of housing opportunities.

Table 4.105 provides a maximum and minimum of any type. The minimum ensures the mix is not a token number.

Table 4.105 Housing Mix Requirements				
Maximum Units		Mix Requirements		
Rural Districts N, AG, CS	Other Districts E, S, AU, U	Minimum Types	Maximum of Any Type	Minimum of Any Type
1–50	1–100	1	100%	20%
51–100	101–200	2	65%	15%
101–250	201–400	3	50%	15%
251 or more	401 or more	4	40%	10%

DIVISION 4.200 RESIDENTIAL USES

Section 4.201 Residential Standards

There are 19 housing types. Each has its own section that provides minimum and maximum standards for that type. These standards are provided to eliminate ordinance constraints on housing design. In most housing types, the lot and bulk standards govern lot size, building bulk, and placement on the lot. Low-rise, mid-rise, and high-rise units are governed by the Floor Area Ratio (FAR) rather than area per dwelling unit (DU).

- A. Yards. Single-family, lot-line, patio, duplex, and triplex units all have street, side, and rear yards that create a buildable area, as illustrated in Figure 4.200A. Where a side or rear yard is also a street yard, the street yard standard prevails.

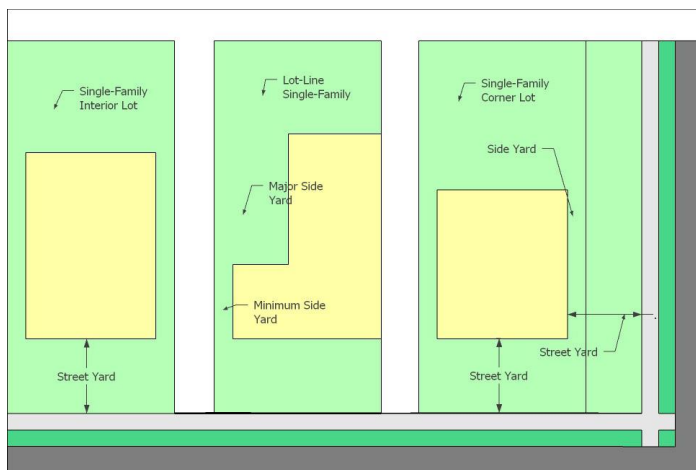


Figure 4.201A Yard types for single-family units

- B. Special. Atrium and carriage units have special yard requirements.
- C. Attached. Twin houses and all townhouse types have one or more sides attached, so there are no side yards or only one side yard or a street yard. End units abutting open space need no side yard.

Section 4.202 Neighborhood Conservation (NC) Single-Family

The standards for the NC districts are set forth in Table 4.202. Districts in red indicate those that have been created in the past to deal with specific problems. These are built-up areas and no lot averaging is required. Figure 4.202 shows the buildable area and yards for single-family. For duplex, manufactured homes, and townhouses, see Sections 4.208–4.214.



Figure 4.202 A

Single-family, large-lot in NC_{1a} district - Buildable area (bright green) and lot (pale green)

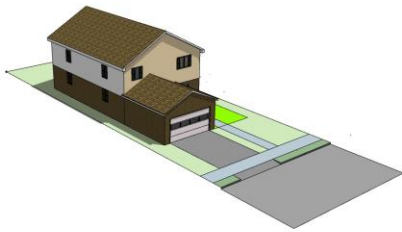


Figure 4.404 B, small 5,500 sf lot in NC_{5.5}.

Table 4.202 NC District Lot and Bulk Standards							
District	Minimum					Maximum	
	Lot Area	Lot Frontage (ft)	Street Yard (ft)	Side Yard Total / Single (ft)	Rear Yard (ft)	Impervious Surface Ratio (ISR)	Height (ft)
NC _{40a}	40 ac	900	150	250 / 75	200	0.02	35
NC _{20a}	20 ac	600	150	200 / 75	200	0.02	35
NC _{10a}	10 ac	400	100	150 / 50	200	0.05	35
NC _{5a}	5 ac	250	80	100 / 30	150	0.07	35
NC _{2a}	80,000 sf	175	50	70 / 25	150	0.12	35
NC _{1a}	43,560 sf	130	50	60 / 20	100	0.15	35
NC ₄₀	40,000 sf	130	37	60 / 20	100	0.15	35
NC ₃₅	35,710 sf	130	40	60 / 20	100	0.15	35
NC ₂₀	20,000 sf	100	30	40 / 15	50	0.18	35
NC _{12n}	12,000 sf	75	30	25 / 10	50	0.24	35
NC _{12w}	12,000 sf	80	30	25 / 10	40	0.33	30
NC ₈	8,000 sf	75	20	20 / 8	30	0.40	30
NC _{5.5}	5,500 sf	50	20	10 / 5	30	0.48	30
NC _{5alley}	5,000 sf	50	8	10 / 5	35	0.50	35
NC _{MH}	4,000 sf	40	10	10 / 5	10	NA	18
NC _D	4,000 sf	45	10	16 / 5	25	0.60	35
NC _{TH}	2,500 sf	25	8	15 / 0	25	0.65	35
NC _{MF8}	1,800 sf	100	8	10/5	15	1.2	100
<p>NC₃₅ was a 40,000 square foot lot where the area was measured from the road's centerline and is now smaller in area.</p> <p>NC_n and NC_w are 12,000 sf lots with different frontages; one would be nonconforming without this designation.</p> <p>NC_{5.5} is for auto-urban character with a snout-house design, with the garage set back 20 feet and the house further back.</p> <p>NC_{5 alley} is designed for urban character, with vehicular access from the alley and the home close to the street.</p> <p>NC_{MH} is for manufactured home parks.</p> <p>NC_D is for duplex developments.</p> <p>NC_{TH} is for townhouse developments; the side yard in this case serves as spacing between groups.</p>							

Section 4.203 Single-Family

Single-family homes are located near the center of a lot with street, side, and rear yards. They are permitted as a use in Article 2, and may be used in cluster, hamlet, or village forms. Table 4.203 indicates lot sizes, with the average size single-family lots that are the basis of district standards in Article 3 highlighted in tan. The very large acreage lots in green are not averaged. In cluster forms, developers may use any of the sizes. The house, lot, and setbacks are illustrated in Figure 4.203.



Figure 4.203A Single-family with alley access for parking

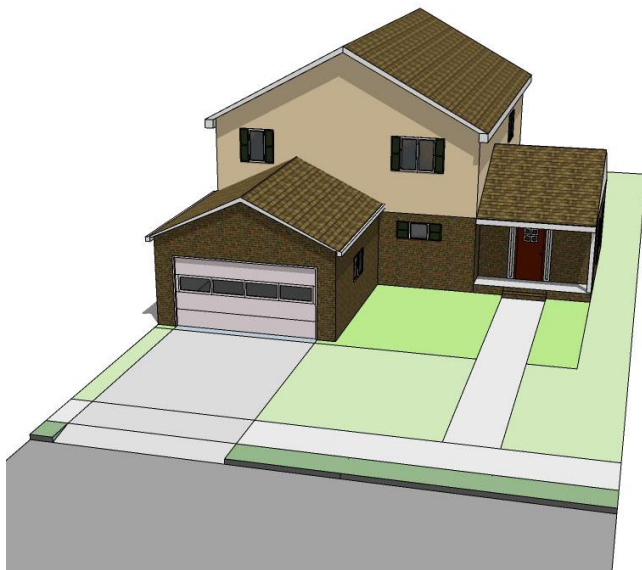


Figure 3.203B Single-family with front-load garage access

The rows in the table in pale light blue are rural lot sizes that permit farm buildings. The lot sizes in grey~~tan~~ represent the average that establishes the lot depth.

Table 4.203 Single-Family Standards							
Minimum						Maximum	
Lot Area	Lot Frontage (ft)	Percent of Size	Street Yard (ft)	Side Yard Single / Total (ft)	Rear Yard (ft)	FAR	Height (ft)
On-Lot Sewer and Water							
40 ac	600	-	100	50 / 100	200	0.25 ¹	35 ²
20 ac	880	-	100	50 / 100	200	0.30 ¹	35 ²
143,748 sf	220	Remainder	75	25 / 70	100	0.08	35
130,680 sf	200	50%	75	25 / 70	100	0.08	35
107,612 sf	180	25%	75	20 / 60	100	0.06	35
49,821 sf	155	Remainder	50	20 / 50	80	0.14	35
45,000 sf	140	50%	50	20 / 50	80	0.14	35
40,179 sf	125	25%	50	15 / 40	80	0.11	35
Lots with Public Sewer and Water							
23,000 sf	115	Remainder	30	12 / 35	50	0.23	35
20,000 sf	100	50%	30	12 / 35	50	0.23	35
17,000 sf	85	25%	30	10 / 30	50	0.19	32
13,500 sf	90	Remainder	25	9 / 25	40	0.32	32
12,000 sf	80	50%	25	8 / 22	40	0.32	32
10,500 sf	70	25%	25	8 / 20	40	0.28	30
Auto-Urban with Street-facing Garages							
10,200 sf	75	Remainder	20	5 / 15	35	0.37	30
8,000 sf	70	50%	20	5 / 15	35	0.37	30
7,800 sf	65	25%	20	5 / 12	35	0.34	30
6,500 sf	65	Remainder	20	5 / 10	40	0.44	32
6,000 sf	60	50%	20	5 / 10	40	0.44	32
5,500 sf	55	25%	20	5 / 10	40	0.40	32
Urban with Alley-facing Garages							
7,534 sf	70	Remainder	10	5 / 10	45	0.45	32
7,000 sf	65	50%	10	5 / 10	45	0.44	32
6,462 sf	60	25%	10	5 / 10	45	0.42	32
5,000 sf	50	Remainder	10	5 / 10	40	0.45	32
4,500 sf	45	50%	10	5 / 10	40	0.44	32
4,000 sf	40	25%	10	5 / 10	40	0.42	32
¹ The FAR includes barns and other outbuildings.							
² For barns or other nonresidential structures, maximum height is 85 ft.							

The major headings are in pale blue In this chart and 4.204 the average or middle lot size row should be highlighted.

Section 4.204 Lot-Line Houses

Lot-line homes come in three configurations: suburban, auto-urban, and urban versions. The lot-line house has only one side yard with the house built on the lot line on the other side. A minimum or major side yard permits an L-shaped house with the leg of the L at the front. A minimum side yard is the minimum distance the dwelling may be from a lot line on the yard abutting another unit. A major side yard is wider and provides usable exterior space with more privacy. Windows are not permitted on the side with the zero lot line. An easement is used to provide access to the side of the house for maintenance of the structure. The standards are contained in Table 4.204. Figure 4.204A shows an urban configuration with alley access to the garage. Street access to the garage is shown in Figure 4.204B.

Table 4.204 Lot-Line House Standards							
Minimum						Maximum	
Lot Area (sf)	Lot Frontage (ft)	Percent of Size	Street Yard (ft)	Side Yard* (ft)	Rear Yard (ft)	FAR	Height (ft)
Suburban							
10,800	90	Remainder	25	8 / 35	40	0.32	32
9,600	80	50%	25	6 / 32	40	0.32	32
8,400	70	25%	25	5 / 25	40	0.28	30
Auto-Urban with Street-facing Garages							
9,000	90	Remainder	20	8 / 35	25	0.37	30
8,000	80	50%	20	6 / 32	25	0.37	30
7,000	70	25%	20	5 / 25	25	0.34	30
Urban with Alley-facing Garages							
6,460	65	Remainder	10	7 / 25	25	0.44	32
6,000	60	50%	10	6 / 22	25	0.44	32
5,540	55	25%	10	5 / 20	25	0.40	32
4,820	57	Remainder	5	5 / 17	25	0.45	32
4,400	52	50%	5	5 / 16	25	0.44	32
3,980	40	25%	5	5 / 15	25	0.42	32
*Minimum/major. The dual side yard provision allows for an L-shaped building (Figures 4.204A and B) with a minimum side yard, as long as the major side meets the second width number.							



Figure 4.204A Lot-line house with alley access provides an urban character

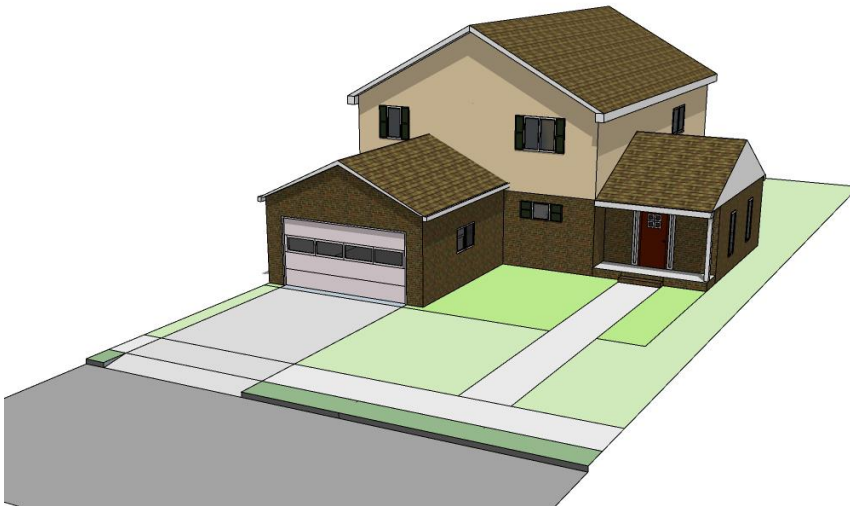


Figure 4.204B Front-load garage provides an auto-urban or suburban character

Section 4.205 Patio House

The patio house is a single-family detached unit which has rear and side yards that are enclosed by a seven-foot-high wall. The wall provides increased privacy on small lots. The back yard provides usable private yard space in a small area. The height of these units is limited so the yards are not too heavily shaded. The front yard may also be enclosed by walls averaging no more than three feet. Table 4.205 contains the standards and Figures 4.205A and B illustrate the unit for both auto-urban and urban configurations.

Table 4.205 Patio House Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	30,000			25,000		
Lot Area (sf)	4,545	5,000	5,455	4,182	4,600	5.018
Frontage (ft)	50	55	60	50	55	60
Street Yard ¹ (ft)	5 / 20	5 / 20	5 / 20	3	3	3
Side Yard (ft)	3	3	3	3	3	3
Rear Yard ² (ft)	35	35	35	40 / 5	40 / 5	40 / 5
Landscape Surface Ratio (LSR)	0.49	0.50	0.50	0.57	0.57	0.57
Maximum Standards						
Building Coverage (BC)	0.45	0.44	0.43	0.50	0.51	0.51
Floor Area Ratio (FAR)	0.56	0.53	0.40	0.61	0.61	0.58
Height (ft)	28	28	28	28	28	28
¹ Setback of the house / setback of garage from street						
² Setback of house / setback of garage from the alley						

This is the format for all other housing types where two sizes are horizontally located.



Figure 4.205A Auto-urban configuration with street-access garage

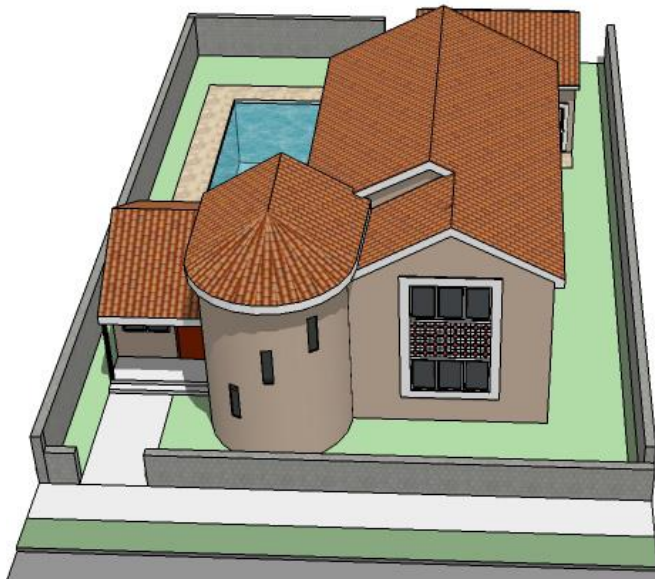


Figure 4.205B Urban configuration with alley-access garage

Section 4.206 Twin House

The twin house is a two-family housing type with the dwelling units sharing a common wall on one side. The units may be on separately owned lots or built as condominiums with both units on a single lot. Table 4.206 contains the standards. Front-loading garages (Figure 4.206A) are set back further from the street to permit drives leading to garages that front on the street. These are auto-urban in character but may be used in suburban settings. The urban variation (Figure 4.206B) uses alley access to the garages.



Figure 4.206A Twin house, auto-urban with street-facing garages



Figure 4.206B Twin house, urban with alley parking access

Table 4.206 Twin House Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	30,000			25,000		
Lot Area (sf)	4,000	4,500	5,000	3,378	3,800	4,222
Frontage (ft)	40	45	50	40	45	50
Street Yard¹ (ft)	20 / 30	20 / 30	20 / 30	10	10	10
Side Yard (ft)	5	5	5	5	5	5
Rear Yard² (ft)	40	40	40	45 / 5	45 / 5	45 / 5
Landscape Surface Ratio (LSR)	0.63	0.63	0.64	0.65	0.64	0.64
Maximum Standards						
Building Coverage (BC)	0.28	0.29	0.29	0.33	0.33	0.34
Floor Area Ratio (FAR)	0.45	0.47	0.49	0.52	0.54	0.57
Height (ft)	24	24	24	24	24	24
¹Setback of the house / setback of garage from street						
²Setback of house / setback of garage from the alley						

Section 4.207 Carriage House

The two-family house is a historic type, with two separate dwellings on one lot. The first is a larger unit on the street face. The second (carriage house) is smaller and located to the rear of the lot, usually above the garage. It can have an auto-urban or urban configuration. The smaller unit may be a rental or a condominium. Both share a common access easement. Table 4.207 provides lot and bulk standards and Figure 4.207 illustrates the type. The following additional standards apply.

- A. Main house. This unit is located on the street face.
- B. Carriage house. This unit is located above the garages for both units, at the rear of the lot. It has a smaller floor area.
- C. Auto-urban. The lot is larger, with a larger side yard for the carriage unit. The minimum side yard is for the building and the total provides room for a driveway.

Table 4.207 Carriage House Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	30,000			25,000		
Lot Area (sf)	7,000	8,400	9,800	6,000	7,200	8,400
Frontage (ft)	50	60	70	50	60	70
Street Yard ¹ (ft)	15	15	15	10	10	10
Side Yard Total / minimum (ft)	17 / 5	17 / 5	17 / 5	10 / 5	10 / 5	10 / 5
Rear Yard ² (ft)	15	15	15	20	20	20
Building Separation (ft)	50	50	50	30	30	30
Landscape Surface Ratio (LSR)	0.63	0.63	0.64	0.65	0.64	0.64
Maximum Standards						
Building Coverage	0.28	0.29	0.29	0.33	0.33	0.34
Floor Area Ratio (FAR)	0.45	0.47	0.49	0.52	0.54	0.57
Height (ft)	24	24	24	24	24	24
¹ Setback of the house / setback of garage from street						
² Setback of house / setback of garage from the alley						



Figure 4.207A Urban carriage house with alley access



Figure 4.207B Auto-urban carriage house with street access

Section 4.208 Atrium House

The atrium house is a one-story unit that is attached at its side to other units. The yard is an interior atrium that provides total privacy. The yard is fully enclosed by the unit or wall of the adjoining unit. All the rooms have windows that look onto the atrium. Where the wall abuts open space, an adjoining atrium, or street, it shall be seven feet high. Figures 4.208A and B illustrate the atrium house and Table 4.208 provides lot and bulk standards. This unit comes in an auto-urban and urban configuration.

Table 4.208 Atrium House Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	30,000			25,000		
Lot Area (sf)	4,273	4,700	5,127	3,636	4,000	4,364
Frontage (ft)	50	55	60	50	55	60
Street Yard ¹ (ft)	2 / 20	2 / 20	2 / 20	0	0	0
Atrium Width (ft)	25	28	30	25	28	30
Atrium Depth (ft)	40	40	40	40	40	40
Rear Yard ² (ft)	0	0	0	0 / 5	0 / 5	0 / 50
Landscape Surface Ratio (LSR)	0.28	0.28	0.27	0.28	0.28	0.28
Maximum Standards						
Building Coverage	0.58	0.65	0.65	0.64	0.69	0.70
Floor Area Ratio (FAR)	0.48	0.56	0.58	0.52	0.59	0.60
Height (ft)	24	24	24	24	24	24
Building Length (ft)	400					
¹Setback of the house / setback of garage from street						
²Setback of house / setback of garage from the alley						

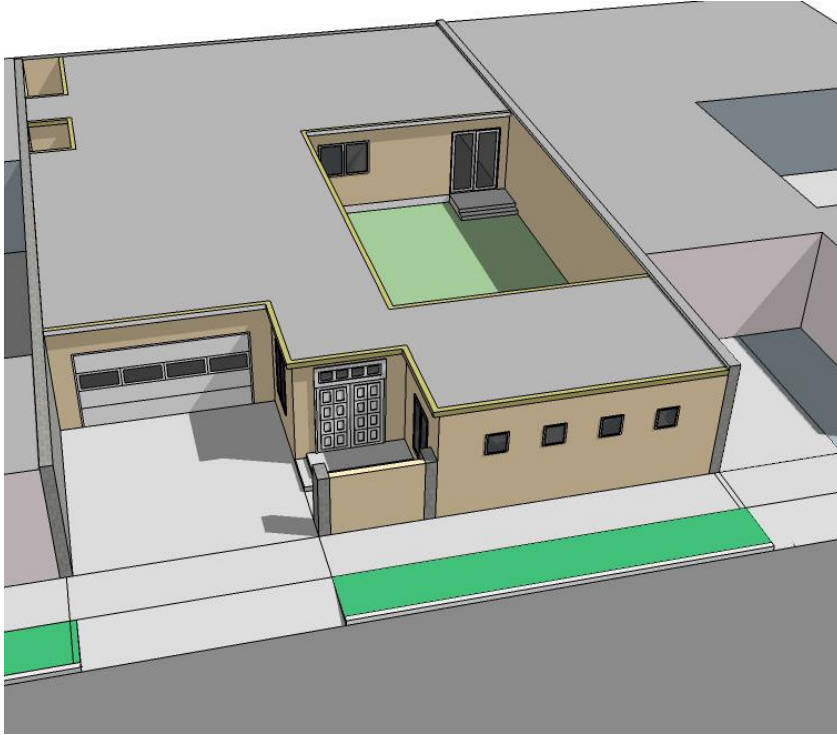


Figure 4.208A Atrium house, auto-urban configuration

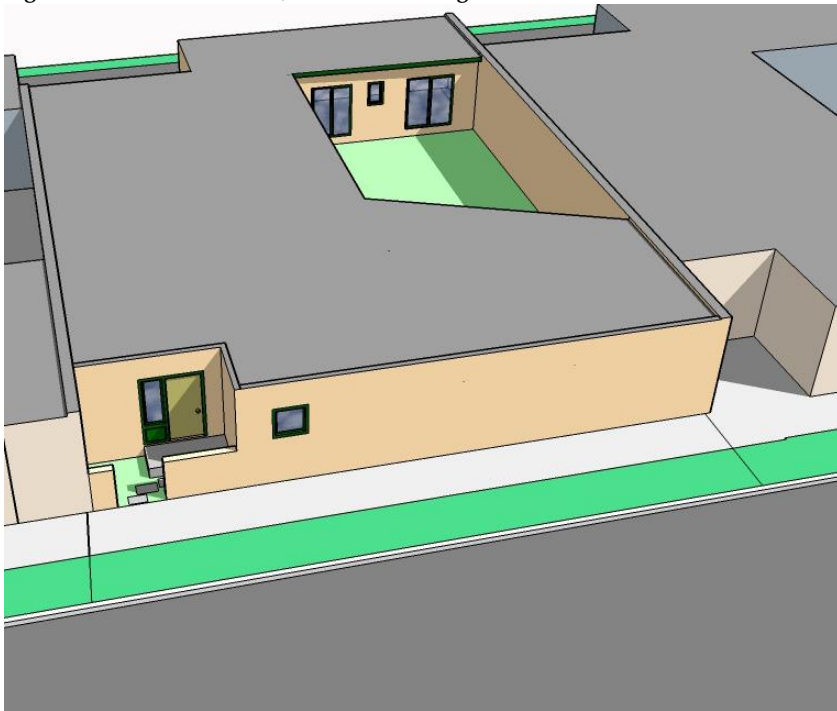


Figure 4.208B Atrium house, urban configuration

Section 4.209 Townhouse

The townhouse is attached to other units on the side lot lines. A building shall have a minimum of at least three units. These units have also been known as row houses, which accurately describes the urban building configuration (Figure 4.209A). It comes in both an urban and auto-urban configuration (Figure 4.209B). Urban units have vehicular access via an alley, while auto-urban units have garages taking access from a street, with a snout-house appearance that destroys a sense of enclosure. Table 4.209 provides the standards. A maximum of 10 units shall be permitted in any one building of townhouses.

Table 4.209 Townhouse Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	24,000			20,000		
Lot Area (sf)	2,600	2,900	3,244	2,200	2,500	2,800
Frontage (ft)	26	29	32	22	25	28
Street Yard ¹ (ft)	36	36	36	10	10	10
Garage Setback ² (ft)	20	20	20	5	5	5
Rear Yard (ft)	35	35	35	45	45	45
Landscape Surface Ratio (LSR)	0.46	0.49	0.51	0.31	0.34	0.36
Maximum Standards						
Building Coverage (BC)	0.41	0.40	0.39	0.65	0.63	0.60
Floor Area Ratio (FAR)	0.66	0.65	0.64	0.90	0.90	0.90
Height (ft)	36	36	36	36	36	36
Building Length (ft)	205			200		
¹ Because this is a snout-house design, the building proper is behind the garage, rooms assumed above garage						
² Setback from street for auto-urban, from alley for urban						



Figure 4.209A Townhouse, urban configuration with alley access



Figure 4.209B Townhouse, auto-urban configuration with street-access garage

Section 4.210 Weak-Link Townhouse

Weak-link townhouses are distinguished from other townhouse types by the fact that each unit has both a one- and two-story section (Figures 4.210A and B). The wider lots and saw-toothed roof lines give these units less of a sense of attachment and larger yards. They come in an auto-urban and an urban character format, depending on whether garage access is from an alley or the street. The one-story section is used for a garage in the auto-urban configuration, and a reduced street setback allows the dwelling mass to be closer to the street. This provides greater enclosure for the weak-link townhouse than the townhouse. The garage is still more than 20 feet from the street. The standards are provided in Table 4.210.

Table 4.210 Weak-Link Townhouse Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	24,000			20,000		
Lot Area (sf)	3,400	3,800	4,200	3,200	3,600	4,000
Frontage (ft)	34	38	42	32	36	40
Width of 1-Story Section (ft)	10	12	14	10	10	12
Street Yard (ft)	12	12	12	10	10	10
Garage Setback¹ (ft)	20	20	20	5	5	5
Rear Yard (ft)	40	40	40	45	45	45
Landscape Surface Ratio (LSR)	0.53	0.50	0.50	0.31	0.34	0.36
Maximum Standards						
Building Coverage (BC)	0.33	0.42	0.42	0.43	0.63	0.60
Floor Area Ratio (FAR)	0.48	0.59	0.60	0.60	0.78	0.79
Height of 1- and 2-Story Sections (ft)	16 / 36	16 / 36	16 / 36	16 / 36	16 / 36	16 / 36
Building Length (ft)	275			300		
¹Setback is measured from the street for auto-urban, from the alley for urban.						



Figure 4.210A Weak-link, auto-urban with street-access garage



Figure 4.210B Weak-link, urban with alley garage

Section 4.211 Roof Deck Townhouse

The roof deck townhouse has a rooftop garden and deck area, with no appreciable outdoor yard area, as seen in Figure 4.211A. The garage is on the ground floor of the house, so it can be three or four stories, including the roof deck level. It comes in both urban and auto-urban variations. The smaller lot allows for more density and greater enclosure in the urban variation. Table 4.211 provides the standards for both types. The following additional standards shall be met.

- A. Deck Area. The deck shall cover 70 percent of the roof.
- B. Green Roof. At least 25 percent of the deck shall include a green roof or planters. Green roof areas may be lightweight but should store at least an inch of rainfall for slow release.
- C. Access. There shall be stairs reaching the roof level with at least an eight-foot ceiling height.

Table 4.211 Roof Deck Townhouse Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	24,000			20,000		
Lot Area (sf)	1,563	1,750	1,938	1,375	1,500	1,628
Frontage (ft)	25	28	31	22	24	26
Street Yard¹ (ft)	20	20	20	10	10	10
Rear Yard (ft)	5	5	5	6	6	6
Landscape Surface Ratio (LSR)	0.195	0.149	0.157	0.186	0.192	0.197
Maximum Standards						
Building Coverage (BC)	0.6	0.6	0.6	0.744	0.744	0.744
Floor Area Ratio (FAR)	0.90	1.11	1.10	1.10	1.35	1.37
Height (ft)	42	42	42	42	42	42
Building Length (ft)	200					



Figure 4.211A Roof deck townhouse with alley garage (not shown)



Figure 4.211B Front-access roof deck townhouse

Section 4.212 Block Townhouse

The block townhouse requires the development of 50–100 percent of an entire block. This type of unit is built over a parking structure, with exterior lots having street frontage. Interior units have frontage on a pedestrian precinct that extends over the garage, but not street frontage. A whole block plan is shown on Figure 4.212A. Figure 4.212B illustrates a street-facing unit and shows the parking below. Table 4.212 provides the standards. The following additional standards apply.

- A. Parking. The parking shall be below grade, with the first floor and the pedestrian precinct averaging no more than five feet above ground level.
- B. Pedestrian Precinct. At least 50 percent of the pedestrian precinct shall be landscaped or in planter boxes, which may include private space for each unit.
- C. Street Yard. The street yard width can be varied but must provide each street-facing unit with an access stair. Fifty percent of the area shall be landscaped.

Table 4.212 Block Townhouse Standards						
Standards	Exterior			Interior or Upper Story		
Minimum Standards						
Lot Area (sf)	1,408	1,600	1,792	1,232	1,400	1,568
Frontage (ft)	22	25	28	22	25	28
Street Yard (ft)	10	10	10	2-ft front area for landscaping		
Rear Yard (ft)	8	8	8	10-ft yard		
Landscape Surface Ratio (LSR) ¹	0.28	0.28	0.28	0.24	0.24	0.24
Maximum Standards						
Building Coverage (BC)	0.72	0.72	0.72	1.00	1.00	1.00
Floor Area Ratio (FAR)	1.20	1.44	1.44	2.06	2.06	2.06
Height (ft)	36	36	36	36	36	36
Building Length (ft)	45			200		
¹ For both exterior units, a majority of the landscaped surface is made up of hard surface. All the interior or upper-story landscaped surface is made up of above-grade hard surface.						



Figure 4.212A Block townhouses occupying an entire block. Garages are under the townhouses and a pedestrian precinct provides yards and access from the street.

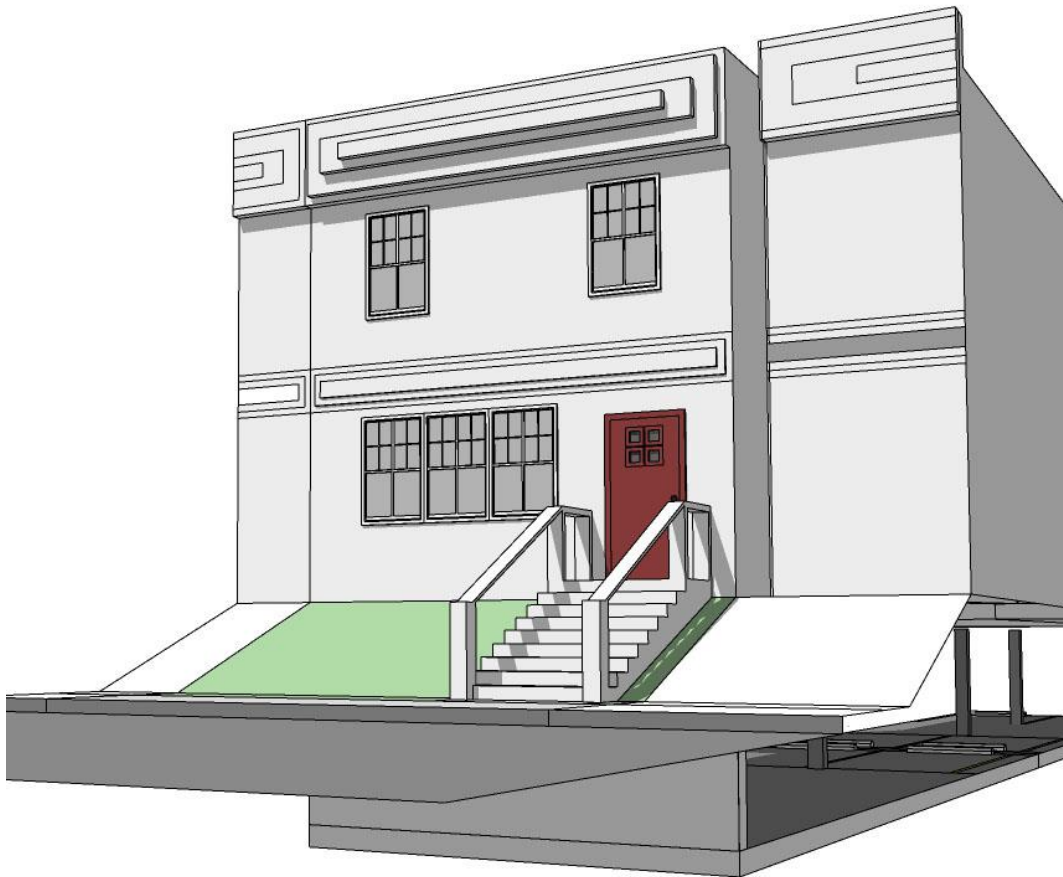


Figure 4.212B Street-facing block townhouse unit showing the elevation of the unit over parking and elevation of the unit above the street

Section 4.213 Duplex

The duplex is a two-family attached unit on a single lot, with one unit located above the other (Figures 4.213A and B). This unit type may be built as a condominium, or the second unit can be rented by the owner who lives in the first unit. Parking is to the rear of the unit. The front yard is intended to provide urban enclosure. The urban duplex has an alley to provide access to parking. The auto-urban lot is wider, providing for a driveway to access rear parking. Figures 4.213A and B show the difference between the urban and auto-urban configurations. The lot and bulk requirements are shown in Table 4.213.

Table 4.213 Duplex Standards						
Standards	Auto-Urban			Urban		
Minimum Standards						
Site Area (sf)	35,000			24,000		
Lot Area (sf)	4,050	4,500	4,950	3,150	3,600	4,050
Lot Area per DU	2,025	2,250	2,475	1,575	1,800	2,025
Frontage (ft)	45	50	55	35	40	45
Street Yard (ft)	10			10		
Side Yard (ft)	5 / 17 ¹			5		
Rear Yard (ft)	40			45 / 5 ²		
Landscape Surface Ratio (LSR)	0.540	0.542	0.543	0.468	0.462	0.457
Maximum Standards						
Building Coverage (BC)	0.308	0.382	0.388	0.981	0.990	0.998
Floor Area Ratio (FAR)	0.600	0.676	0.695	0.61	0.61	0.58
Height (ft)	28			28		
¹ Single side yard / total side yard						
² Setback of the house from alley / setback of garage from alley						



Figure 4.213A Duplex, urban configuration with alley access to parking



Figure 4.213B Duplex, auto-urban configuration with driveway access to rear parking

Section 4.214 Triplex

The triplex is an urban multifamily type with three units, one per floor. As with the duplex, street setbacks provide an urban character. It has an urban or auto-urban configuration; the difference is that the auto-urban configuration does not have alley access, so the lot area and width are increased to allow access to rear parking. Parking can be in garages or on a parking lot. Figures 4.214A and B show the units, and Table 4.214 provides the standards for this unit type.

Table 4.214 Triplex						
Standard	Auto-Urban (AU)			Urban (U)		
Minimum Standards						
	Small	Average	Large	Small	Average	Large
Lot Area per DU (sf)	1,527	1,867	2,206	1,333	1,500	1,667
Lot Area (sf)	4,582	5,600	6,618	4,000	4,500	5,000
Frontage (ft)	46	56	66	40	45	50
Street Yard (ft)	12	12	12	10	10	10
Side Yard (minimum / total)	6 / 18	6 / 18	6 / 18	5 / 10	5 / 10	5 / 10
Rear Yard (ft)	30	30	30	35	35	35
Garage Setback (ft)	5	5	5	5	5	5
Maximum Standards						
Floor Area Ratio (FAR)	0.623	0.624	0.692	0.750	0.850	0.900
Building Coverage	0.530	0.496	0.472	0.583	0.557	0.522
Landscape Surface Ratio (LSR)	0.428	0.425	0.423	0.591	0.592	0.586
Height (ft)	45	45	45	45	45	45



Figure 4.214A Urban triplex with alley access to parking



Figure 4.214B Auto-urban triplex with driveway access to rear parking

Section 4.215 Neighborhood Multifamily

This is a small-scale (four to nine dwelling units) form of multifamily housing. It is intended to provide small multifamily units but is designed to look like a large single-family dwelling. The small units allow increased density while maintaining the single-family appearance of the neighborhood because the structure is generally comparable in scale to surrounding homes. It is suitable for suburban, auto-urban, or urban character areas. Suburban and auto-urban character districts are limited to a maximum of six units and a driveway that leads to rear parking. In urban character districts, the structure may be two or three stories and parking is accessed via an alley. No more than one building is permitted per lot. Table 4.215 presents the standards.

Table 4.215 Neighborhood Multifamily						
Standard	Suburban or Auto-Urban		Urban			
Minimum Standards						
Units	4	6	4	6	8	9
Stories	2		2			3
Minimum Lot Area (sf)	10,230	12,555	6,750	9,000	10,500	10,500
Lot Area per du (sf)	2,558	2,093	1,688	1,500	1,313	1,333
Minimum Lot Width (ft)	62	77	45	60	70	80
Street Yard (ft)	15		10			
Side Yard (minimum / total) (ft)	5 / 26		5 / 10			
Rear Yard (ft)	20		20			
Maximum Standards						
Floor Area Ratio (FAR)	0.235	0.257	0.356	0.400	0.457	0.450
Building Coverage (BC)	0.117	0.237	0.178	0.200	0.229	0.150
Impervious Surface Ratio (ISR)	0.461	0.495	0.504	0.400	0.581	0.533
Height (ft)	35		35			45

This type is ideal in urban areas for infill development or urban renewal, where it greatly raises density because the street system already exists. It can be used in new developments as well. A suburban six-unit building is shown in Figure 4.215A. Figure 4.215B shows a four-unit, or fourplex, unit ideal for infill development on individual lots.



Figure 4.215A Auto-urban neighborhood multifamily building with six units



Figure 4.215B Urban neighborhood multifamily four-unit building, which is called a fourplex in some communities

Section 4.216 Garden Apartments

This type of multifamily dwelling consists of two-to-three-story buildings with surrounding lawns and surface parking. It can be suburban or auto-urban but cannot be urban because this unit type relies on surface parking. This type is most commonly found in new apartment complexes, where there are multiple buildings on a parcel and an internal street system is required. The buildings may have parking lots or, as shown in Figure 4.216, some individual units may have a garage under or next to them. Table 4.216 provides the suburban and auto-urban standards. A single garden apartment may be placed on an individual lot.

Table 4.216 Garden Multifamily				
Standards	Suburban		Auto-Urban	
Minimum Standards				
Site Area (sf)	66,000	84,000	66,000	70,000
Stories	2-story	3-story	2-story	3-story
Lot Area/du. (sf)	2,466	1,994	2,361	1,681
Street Yard (ft)	20	20	10	10
Side Yards (ft)	20	20	20	20
Rear Yard (ft)	25	25	25	25
Parking Setback – Road (ft)	20	20	10	10
Building Parking Setback (ft)	10	10	8	8
Parking Spaces per DU	2	2	2	2
Building Separation, Window Walls/ Blank Walls	50/20	60/20	40/15	45/20
Maximum Standards				
Height (ft)	32	45	32	45



Figure 4.216 Garden apartment, suburban or auto-urban

Section 4.217 Urban Low-Rise Multifamily

This is an urban housing type that requires structured parking, either on-site or in off-site public parking. These housing types are not regulated by density, but by the FAR. Thus, density is mainly determined by the size of the dwellings and the parking required. Height can range from two to 10 stories. Parking is within the buildings or below grade. In Figure 4.217, side yards are shown. This assumes relatively large properties. There are cases where the parcels are shallow, and all dwellings would face to front or rear. In those situations, the planning director has the authority to eliminate the side setback for all interior lot lines on a block.

Table 4.217 Low-Rise Multifamily						
Minimum Standards						
Site Area (sf)	11,700		16,900		24,700	
Stories	3-story	4-story	5-story	6-story	8-story	10-story
Frontage (ft)	90		130		190	
Street Yard (ft)	10	10	10	10	10	10
Total Side Yards (ft)	10	10	10	10	10	10
Rear Yard (ft)	5	5	5	5	5	5
Parking Spaces per DU	1.0	1.0	1.0	0.75	0.75	0.75
Maximum Standards						
Residential FAR	2.359	3.145	4.083	4.899	6.704	8.381
Total FAR*	3.145	4.156	5.412	6.096	8.354	10.450
Height (ft)*	46	56	66	76	106	136
*The total FAR and height include parking floors.						



Figure 4.217 Urban low-rise multifamily

Section 4.218 Stepped Multifamily

This dwelling type requires each unit to have a balcony with a minimum width from unit to railing, running along the entire face of the unit, on the downhill side. Figure 4.218 illustrates the building on a sloped site of 30 degrees. It can be double-sided or installed on the face of parking structures. No surface parking is permitted. Access is usually from below, but, in some cases, may be from a street near top units. The parking is located within the building footprint on one or more floors. Table 4.218 provides the general standards. The density is highly variable and actual intensity is measured by the floor area ratio (FAR). Note: The standards in Table 4.218 are based the 1,400 square foot average unit size, see Section 10.211 to modulate these standards for different average unit size.

Table 4.218 Stepped Multifamily	
Standard	Minimum
Minimum Lot Area	9,000 sf ¹
Lot Width	90 ft
Street Setback	5 ft
Side Yard Setbacks	5–10 ft total
Rear Yard Setback	20 ft
Ground-Floor Unit Yard	12 ft
Balcony/Patio Width	12 ft
Unit Width	30 ft
Average DU Size	1,400 sf
	Maximum
Maximum FAR	1.0
¹ This is the area for a 6-unit building 2 units wide & 5 stories high. Larger buildings require more area and area must be calculated from actual design. The minimum is the building footprint plus the yard areas.	



Figure 4.218 Stepped multifamily unit on hillside

Section 4.219 UM and UC District Residential

Intensity is controlled by FAR and density is primarily a factor of average unit size in the building and parking requirements. Residential uses are encouraged in mixed-use structures, so setbacks and height are controlled by the standards of Section 4.404 and its table.

Section 4.220 Exceptions to Lot and Bulk Standards

The following residential building elements are permitted within the required yards for residential structures.

- A. Frontage. Frontage of all unit types is measured at the street setback line, so there is built-in flexibility for pie-shaped lots. The minimum width at the street lines is 14 feet for one-car drives or 20 feet for two-car drives. In cluster developments, irregular lots, as shown in Figure 4.220, are not flag lots and they shall be encouraged because they are more efficient than pie-shaped lots and provide better views of open space.

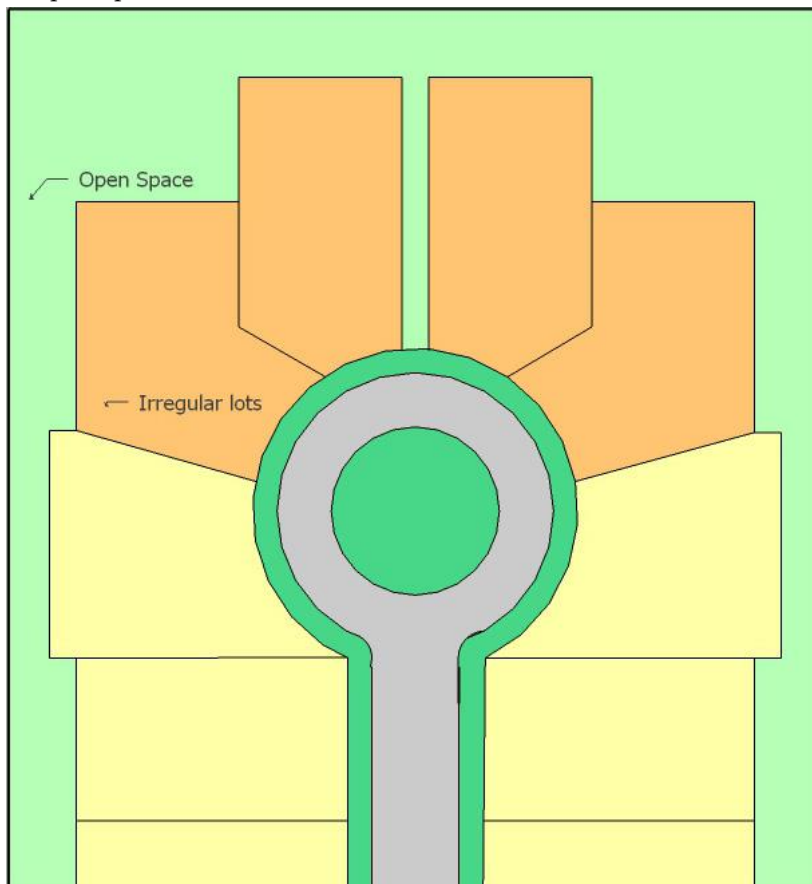


Figure 4.220 Irregular lots as shown are not flag lots, but efficient irregular lots.

- B. Setbacks. Portions of buildings shall be permitted to extend into the yard setbacks as indicated below.
1. Masonry chimneys shall be permitted to extend up to three feet into yards that are wider than six feet.

2. Bay windows or similar windows not mounted on a foundation may be permitted to extend into front or rear yards up to three feet.
 3. Entrance stoops (less than 24 square feet in area) and stairs may extend into front and rear yards, provided that the stoop floor is no more than three feet above the final finished grade.
 4. Where the finished floor is more than three feet above the final grade, the stoop shall be within the building envelope.
 5. Ramps to provide wheel chair access.
 6. Stairs to the first floor not mounted on a foundation may extend up to 3.5 feet into side yards that are greater than seven feet in width.
 7. The roof may extend up to three feet beyond the setback lines.
 8. Patios, decks, pools, and outbuildings are permitted in rear yards, provided they meet side yard setbacks and occupy no more than 10 percent of the landscaped surface area.
- C. Height. The following elements may exceed the maximum height of buildings.
1. Chimneys may, if needed for proper function, extend up to four feet above the maximum height. The determination shall be the height above nearby roofs needed to achieve proper functioning of the chimney.
 2. TV antennas, but not dishes, may extend up to six feet above the maximum height or peak of the roof, whichever is greater.
 3. Wind Turbines. Wind turbines are permitted as limited uses in residential areas and are exempt from the height limitations of Division 3.400. Wind farms are listed as special uses; they are controlled by Sections 2.310R (Rural), 2.309S (Sub-Urban), and 2.309U (Urban).

Section 4.221 Fences and Walls

Fences and walls may be built on the property lines of single-family and some attached single-family units, in accordance with this section.

- A. Rear Yards. Rear yards may be enclosed with fences to provide security for children, pets, or privacy. The following regulations affect height.
1. Chain-link or other see-through fencing with a maximum height of four feet is permitted for all fee simple lots. Duplex, triplex, and condominium-owned or controlled lots shall submit a fencing plan at the time of development to determine whether fences are permitted for the entire development.
 2. On lots where the average lot area is greater than 4,500 but less than 8,000 square feet, fencing or walls, primarily for privacy, may be approved for entire developments at the time of platting, with a maximum height of five feet.
 3. Single-family lots with an average lot size of 4,500 square feet or less and two-family units may have fences or walls up to six feet in height approved at the time of platting. Mandatory walls or fences may be approved with a pattern book approval.
 4. Townhouse types may have walls or fences up to eight feet in height approved with a pattern book.
 5. Patio house and atrium units have walls regulated in Sections 4.205 and 4.208, respectively.
- B. Street Yards. No fencing or walls shall be permitted in street yards, unless approved by the pattern book that governs their design. The walls or fences shall be provided for all units. The pattern book

may include a variety of approved designs that provide a common character. The height of walls and fences shall be less than four feet. Fences of wrought iron or similar material with an opacity of less than 15 percent, including masonry piers, are permitted where the fence is appropriate to the building architecture.

- C. Fences Against Open Space. Fences along open space at the lot line shall be limited to four feet in height, except that taller fences may be permitted where intended to prevent access to large predators or herbivores. All such fencing shall have access gates to the open space.
- D. In AG districts, fencing to keep livestock from entering the lots shall be placed a minimum of five feet from common open space to allow pedestrian access between lots.
- E. Material. Fences may be constructed of metals, wood, or fiberglass or similar plastics. Walls may be constructed of brick, stone, imitation stone, stucco-covered concrete blocks, or precast concrete panels.
- F. Retaining walls shall be located entirely on the lot and are permitted where needed to avoid erosion. They shall be encouraged on mild slopes to avoid mass grading of the site. All retaining walls shall be approved by a registered engineer.

DIVISION 4.300 AFFORDABLE HOUSING TYPES

Section 4.301 Purpose

This division provides two affordable housing types that are smaller than the housing types in Division 4.200: small-family housing and accessory uses. Small-family units are intended to be one-bedroom units. The conversion of larger, older homes is permitted to allow families to remain in these units and provide additional housing. The size of the small-family units is intended to make them more affordable because of the limited floor area and density increase. As such, they are provided with a density bonus as a unit type (Section 3.317).

Section 4.302 Small-Family Housing

The small housing unit is a one-bedroom or efficiency unit that comes in four styles: one-story bungalows, two-story cottages, atrium houses, or apartment units. All these units are much smaller than the dwellings feasible in the housing types of Division 4.200. The first three types are shown below in Figures 4.302A–C and the standards in Table 4.302. Small apartment units are controlled by C below.

- A. Site Standards. The units are intended for infill development on existing lots. In new developments, they may be permitted as part of required affordable housing.
1. The development of a parcel shall respect the street or side yards of existing housing in the district.
 2. The rear yards may be reduced to the dimension of the side yards.
 3. Parking will be required on the site.
- B. Three small-family units, in atrium, cottage, and bungalow configurations, are permitted as seen in Figures 4.302A–C and Table 4.302.



Figure 4.302A Small-family atrium

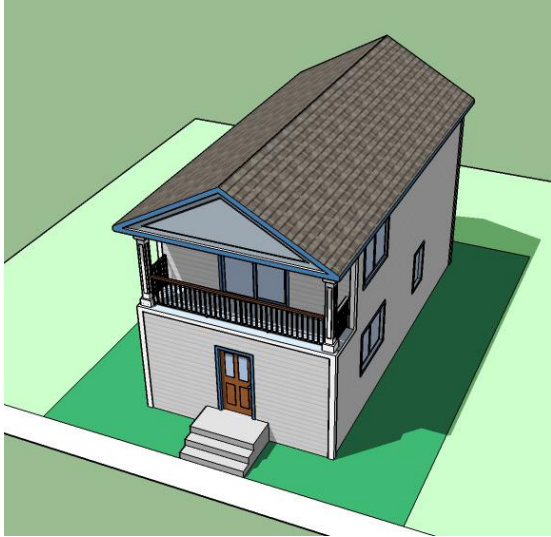


Figure 4.302B Small-family cottage

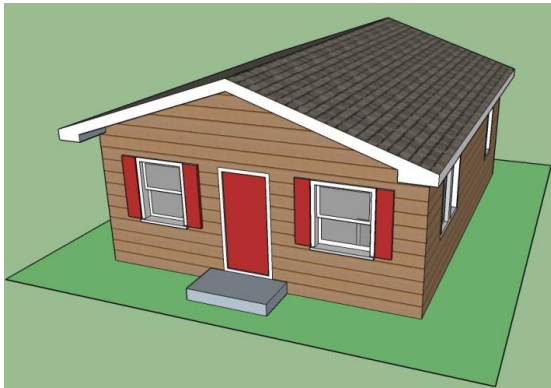


Figure 4.302C Small-family bungalow

Table 4.302 Small-Family Unit Standards			
Standard	Bungalow 1-Story	Cottage 2-Story	Atrium Attached
Individual Lot Standards			
Minimum Lot Area per unit (sf)	1,000	1,100	880
Maximum Lot Area per unit (sf)	1,200	1,300	1,100
Maximum FAR	0.50	0.80	0.79
Spacing (ft)	10	10	attached
Maximum Height (ft)	18	26	16
Parcel Standards			
Minimum LSR	0.56	0.53	0.43
Maximum Gross Density	27.92	25.93	32.29
Street Setback (ft)	10	10	10
Side or Rear Yard Setback (ft)	5	7	5
Parking Setback (street / alley) (ft)	10 / 0	10 / 0	8 / 0

- C. Small Apartment Units. Efficiency or one-bedroom units shall be permitted in low-, mid-, or high-rise buildings in the U, UM, or UC districts. They are intended for use where market rents are making housing prohibitively expensive for people working in the community. The following standards apply.
1. The housing agency shall make a finding that units of these small sizes are necessary to meet affordable housing needs.
 2. Units shall have minimum and maximum areas of 165 and 250 square feet, respectively.
 3. A compact bath, toilet, and shower facility shall be used to permit smaller units.
 4. Living space shall be designed for compact living as an efficiency or one-bedroom unit.
 5. They are limited to one- or two-person occupancy.

Section 4.303 Small-Family Housing Site Standards

Small-family housing units are primarily intended for single persons, elderly, or young couples with no children. They are used as infill development or redevelopment to raise density, to provide affordable units, and/or to meet special housing needs. They are not intended for a subdivision of small-family housing. Because of their higher density, the following criteria are used to control the maximum number of such units in an area.

- A. Institutional. When adjoining a religious institution or other institutional entity where the units are being provided by such entities for lower-income congregant care, a maximum of 60 units is permitted.
- B. Commercial. Within 200 feet of a commercial zoning district or commercial development, a maximum of 24 dwelling units is permitted.
- C. Elderly. In a for-profit congregant care facility that includes unit types from Division 4.200, a maximum of 30 percent of the facility's units may be small-family housing units. When all units are small-family housing units, there may be no more than 30.
- D. Transit. On properties within 800 feet of a bus or light-rail transit stop, up to 50 small-family units are permitted.

Section 4.304 Multifamily, Low-, Mid-, and High-Rise

The multifamily in low-, mid-, and high-rise buildings are controlled by floor area and there is a minimum FAR. Table 4.304 provides the minimum and maximum floor areas for these affordable units.

Table 4.304 Minimum and Maximum Size Affordable Low-, Mid-, and High-Rise Units		
Type	Minimum (sf)	Maximum (sf)
Efficiency	240	360
1 Bedroom	384	480
2 Bedroom	600	800
3 Bedroom	720	1,000
4 or more Bedrooms	1,050	1,300

Section 4.305 Accessory Dwellings

These units may provide affordable housing. They may also serve to provide privacy for members of an extended family in a separate unit in what would otherwise be a single-family unit unrelated to the provision of affordable housing. Section 4.305 controls new development where the developer seeks approval of accessory dwellings. Section 4.306 covers conversion of existing structures to accessory dwellings. Where used for affordable housing, accessory dwellings shall be approved by the housing agency (Section 6.305).

Section 4.306 New Accessory Dwelling Units

Accessory dwelling units having more than one bedroom shall not be permitted in new subdivisions but designed as carriage house units (Section 4.207). They shall be counted toward the permitted density. The development of a new house with a one-bedroom accessory unit that does not count toward density is permitted, subject to the following provisions.

- A. Eligibility. There are two ways in which a person can demonstrate eligibility.
 - 1. The owner demonstrates that there is a family member or multigenerational household requiring an accessory unit. OR
 - 2. The owner has entered into an agreement with the housing agency to provide such a unit.
- B. Exemption. When approved, such an accessory unit is allowed over and above the permitted density and limitation of one unit per lot.
- C. Lot limitations. They must be on single-family lots greater than 10,000 square feet.
- D. Location. The accessory unit may be in the house on a separate floor, in a wing of the house, or in a garage structure that meets setbacks of this article.
- E. Size. The accessory unit shall not exceed 20 percent of the floor area, or 600 square feet, whichever is less, for a one-bedroom unit.
- F. Ownership. The principal unit shall be owner-occupied.
- G. Parking. One off-street parking space shall be provided in addition to the parking requirement for the dwelling unit.

Section 4.307 Conversion to Accessory Unit

The conversion of large existing dwellings can increase the housing stock in the jurisdiction and may allow people to hold onto the larger dwelling while generating income from renting. It is intended to allow continued ownership of a unit rather than forcing the resident out. It also may avoid teardowns that would result in gentrification. Conversions resulting in accessory or secondary dwelling unit(s) shall not be considered a violation of the zoning district intensity when the following criteria are met.

- A. Eligibility. The owner of the unit shall live in it. The applicant shall demonstrate need where more than one accessory unit is to be provided. The planning director shall determine this based on the following criteria.
 - 1. The house is so large in comparison to the owner's family size that tenants are warranted.
 - 2. The owner needs economic assistance from the rents to continue living in the unit.
 - 3. The reconfiguration of rooms can be accomplished in a manner that allows easy restoration to single occupancy.

4. There will be no more than three units in the building.
- B. Minimum Lot and Building Standards. To be eligible for conversion, the dwelling shall have a minimum of 2,400 square feet on a conforming NC district lot.
- C. Owner's Quarters. The owner's quarters in the conversion shall have one bedroom per family member in the household, other than couples, after creation of the accessory unit(s). Such units shall have separate bathrooms, kitchen, and living or family room. The planning director may require additional rooms if the owner's family size warrants it.
- D. Tenants. Tenants may be family or unrelated. Each accessory unit shall have a separate bath and kitchenette and a minimum of 400 square feet. Common entries are permitted. Each tenant space shall be designated as to family size permitted, with one bedroom per family member other than the couple.
- E. Conversion. All conversions shall be in the interior of the existing building, with the exception of fire access improvements to meet code, or small elevators.
- F. Parking. There shall be at least two parking spaces on the lot, plus one additional space for each rental unit.

DIVISION 4.400 NONRESIDENTIAL BULK REGULATIONS

Section 4.401 Nonresidential Bulk Standards

Nonresidential land uses are regulated by the maximum FAR and minimum LSR in auto-urban districts. For urban (U), urban mid-rise (UM), and urban core (UC) districts, many uses have zero setback. Figure 4.401 illustrates the yards.

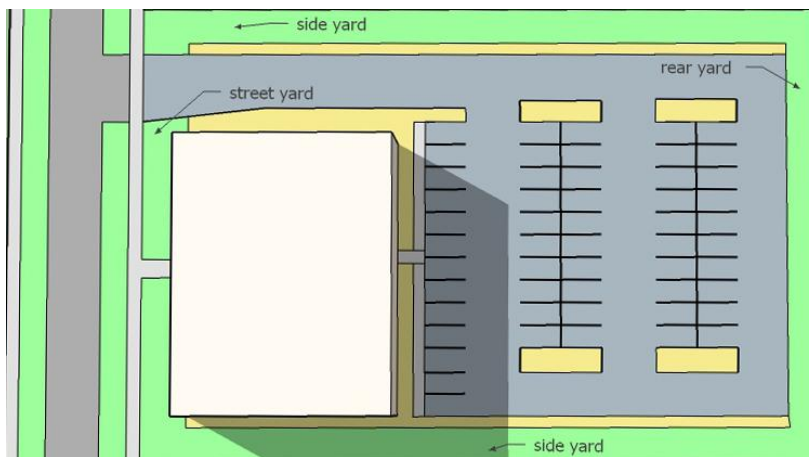


Figure 4.401 Nonresidential yards

Section 4.402 Rural Nonresidential Bulk Standards

The minimum lot area, lot widths, and setbacks for nonresidential uses are set forth by zoning district in Table 4.402.

Table 4.402 Rural Nonresidential Bulk Standards					
Zoning District and Uses	Minimum Standards				
	Lot Area (ac)	Lot Width (ft)	Street Yard (ft)	Side Yard* (ft)	Rear Yard* (ft)
Natural (N)					
Institutional Uses	20	500	50	25	30
Industrial Uses	10	400	50	25	30
All Other Single Uses	1	150	50	20	30
Development	15	300	50	20	30
Agriculture (AG)					
Institutional Uses	10	400	50	25	30
Industrial Use	4	300	100	30	50
All Other Single Uses	1	150	50	20	30
Development	15	300	50	25	30
Countryside (CS)					
Institutional Uses	2	200	50	30	40
All Other Single Uses	1	150	50	20	40
Development	10	300	50	25	40
Mining (M)					
Extraction and Disposal	40	1,000	100	100	100
All Other	2	200	50	25	30
*The side and rear yards may be reduced to five feet where a bufferyard is required and the sum of the bufferyard and reduced yard meets the standard.					

The district bars are colored

Section 4.403 Sub-Urban Nonresidential Bulk Standards

The minimum lot area, lot widths, and setback for nonresidential uses are set forth by zoning district in Table 4.403.

Table 4.403+ Sub-Urban Nonresidential Bulk Standards					
Zoning District and Uses	Minimum Standards				
	Lot Area	Lot Width (ft)	Street Yard (ft)	Side Yard (ft)*	Rear Yard (ft)*
Estate (E)					
Institutional	5 ac	300	100	25	50
Commercial and Indoor Recreation and Amusement	1 ac	150	50	25	30
Outdoor Recreation and Amusement	10 ac	400	100	50	50
Industry	3 ac	200	50	50	50
All Other Single Uses	5 ac	300	75	50	50
Suburban (S)					
Institutional Uses	1 ac	150	25	15	40
Commercial and Indoor Recreation and Amusement	10,000 sf	75	20	8	20
Outdoor Recreation and Amusement	2 ac	150	25	10	30
All Other Single Uses	3 ac	200	25	10	30
Business Park (BP)					
Commercial Uses	1 ac	140	40	20	20
All Other Uses	2 ac	200	50	20	20
Industrial (I)					
Commercial Uses	1 ac	140	40	20	20
All Other Uses	20,000 sf	100	25	15	25
*The side and rear yards may be reduced to five feet where a bufferyard is required and the sum of the bufferyard and reduced yard meets the standard.					

Section 4.404 Urban Character Nonresidential

The minimum lot area, lot width, and setbacks for nonresidential uses in AU, U, UM, and UC character zoning districts are set forth in Table 4.404.

Table 4.404 Urban Nonresidential Bulk Standards					
Zoning District and Uses	Minimum Standards				
	Lot Area* (sf)	Lot Width (ft)	Street Yard (ft)	Side Yard (ft)*	Rear Yard (ft)*
Auto-Urban (AU)					
Institutional	40,000	130	15	10	20
Commercial	20,000	80	15	5	20
Indoor Recreation and Amusement	20,000	80	15	5	20
Outdoor Recreation and Amusement	80,000	150	15	10	20
Urban (U)					
Institutional	20,000	100	0	0	10
Outdoor Recreation and Amusement	30,000	120	0	0	10
Individual Freestanding	2,500	20	0	0	10
Mixed Uses or Multi-Tenant	7,500	60	0	0	10
Urban Mid-Rise (UM)					
Institutional	20,000	100	0	0	0
Outdoor Recreation and Amusement	30,000	120	0	0	0
Individual Freestanding	10,000	80	0	0	0
Mixed Uses or Multi-Tenant	40,000	100	0	0	0
Urban Core (UC)					
Institutional	40,000	150	0	0	0
Outdoor Recreation and Amusement	80,000	300	0	0	0
Individual Freestanding	10,000	120	0	0	0
Mixed Uses or Multi-Tenant	40,000	150	0	0	0
*The side and rear yards may be reduced to five feet where a bufferyard is required and the sum of the bufferyard and reduced yard meets the standard.					

Section 4.405 Nonresidential Use Districts

Table 4.405 provides bulk standards for BP, I, and HI districts. Figure 4.401 illustrates the yards.

Table 4.405 Urban Nonresidential Bulk Standards					
Zoning District and Uses	Minimum Standards				
	Lot Area (sf)	Lot Width (ft)	Street Yard (ft)	Side Yard (ft)*	Rear Yard (ft)*
Business Park (BP)					
Office	20,000	100	10	0	10
Industrial	20,000	100	10	0	10

Exterior Storage	20,000	100	20	0	10
Industry (I)					
Industrial	20,000	100	10	0	10
Exterior Storage	20,000	100	20	0	10
Heavy Industry (HI)					
Commercial	10,000	40	0	0	10
All Other Uses	250,000	200	40	40	40
*The side and rear yards may be reduced to five feet where a bufferyard is required and the sum of the bufferyard and reduced yard meets the standard.					

Section 4.406 Build-To Line

All land uses in the U, UM, and UC districts in Table 4.404 have street yards of zero feet and shall be built to this minimum, except as follows.

- A. Restaurants. Where restaurants are intended, the restaurant or portions of a building with multiple tenants may be set back to provide outdoor eating areas.
- B. Street Art. Where street art is provided in the form of fountains or sculpture, a display court or plaza may be provided.
- C. Where the developer wishes to place plazas or other spaces and submits a pattern book, such setbacks and spaces may be approved by the planning director. The pattern book application shall show the distance to height (D/H) ratios of the code along with the proposed plan, shadows, and a three-dimensional model or computer simulation to determine that the desired urban character of the district is maintained.

Section 4.407 Pedestrian Precincts

In the U, UM, and UC districts, where the developer proposes pedestrian precincts other than the street sidewalks, the plan shall be submitted as a pattern book. If the proposal is for an offset pedestrian precinct, it shall be approved if it meets the standards of Division 11.400. If some other form of pedestrian precinct is proposed, it shall be a block or half-block in area. The planning director shall review D/H ratios of the code and the proposed plan, shadows, a three-dimensional model or computer simulation, and parking to determine that the desired urban character of the district is maintained. All buildings on the pedestrian precinct level shall have direct access to the pedestrian precinct. The width of the pedestrian precinct shall be adequate for pedestrians, emergency access, and, if permitted, kiosks.

Section 4.408 Exceptions to Lot Setback Standards

The following residential building elements are permitted within the required yards for residential structures. Portions of buildings shall be permitted to extend into the yard defined by the setbacks as indicated below.

- A. Where approved by the fire marshal and engineer, an entrance canopy of up to eight feet in width may extend to within two feet of the curb, provided it is made of light materials and the jurisdiction is held harmless from any damage.

- B. Bay windows or similar windows not mounted on a foundation may be permitted to extend into the street right-of-way or up to three feet, provided the bottom of the structure is at least 20 feet above grade.
- C. Projecting balconies may be permitted to extend up to three feet into the street right-of-way, provided the building design results in balconies at least five feet in width and are at least 20 feet above grade.

Section 4.409 Exception to Height

The following elements may exceed the maximum height of buildings.

- A. Stepped Buildings. A stepped building has building setbacks or step backs (Figure 4.409A) that alter the floor plate dimensions. Where setbacks are required, the height shall be increased in the U, UM, and UC districts to permit the maximum floor area to be achieved.

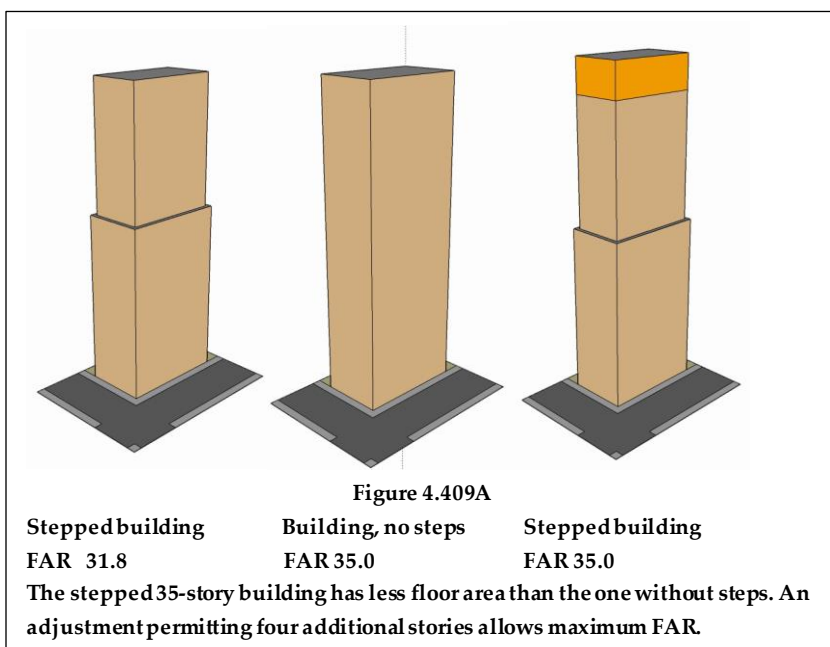


Figure 4.409A

- B. Architectural Features. Architectural features that enhance the appearance of the building's roof line may be approved. The design review committee shall be permitted to add 5 percent or 20 feet, whichever is less, to the building height. The committee shall determine that the addition creates building design with a base, tower, and top that is consistent in its design elements. They shall further determine the design does not create a visual conflict with any historic buildings.
- C. Wind Turbines. In the UM and UC districts, wind turbines built into the structure shall be permitted, provided the increase in height is only that needed for the turbines and their supporting structure.

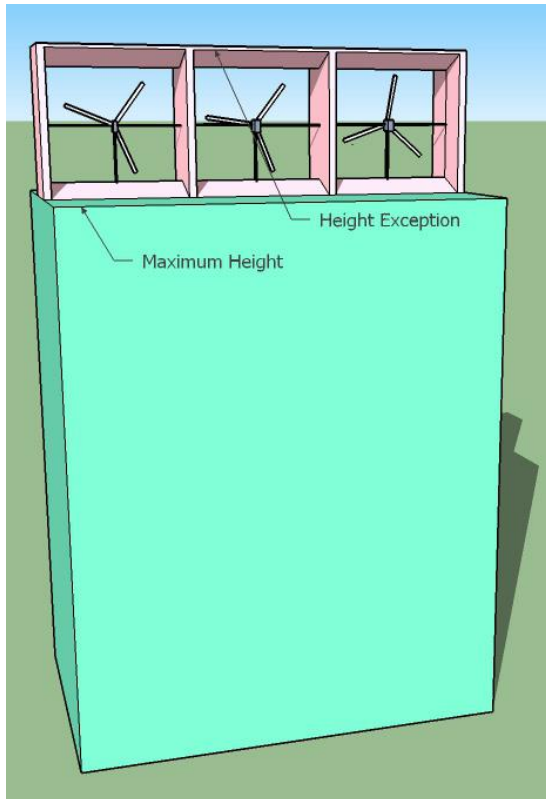


Figure 4.409C Wind Turbines on roof may exceed maximum height.

- D. Commercial Antennas. TV broadcast antennas and other commercial communication antennas may extend up to 100 feet above the maximum height in the UC and UM districts, provided they meet building code and are pole-type structures. If they are designed to be architectural, they may be permitted to extend up to 140 feet. This means the towers must be architecturally integrated into the total building design and gradually taper (see B). To the maximum extent feasible, the antenna shall be integrated to the architecture and only the top 25 percent of the extension shall be pole-type. Such towers shall be reviewed to ensure they do not represent a hazard for aircraft, as certified by the Federal Aviation Administration (FAA).

Section 4.410 Height Exception for Special Building Design

Where there are multiple buildings on a block or parcel, or where upper-level building connections are desired, the planning director may approve exceptions. In all cases, the separation of buildings or reduced façade area results in achieving the maximum permitted FAR at the maximum height. The increased height in additional stories shall be limited to that required to allow the achievement of the maximum permitted FAR.

- A. Multiple Buildings. When multiple buildings on a site (Figure 4.410A) are connected by a ground-level pedestrian precinct, an increased height may be granted. The site shall be a block or more in area in the U, UM, and UC districts. In the U district, the at-grade pedestrian precinct shall occupy no more than 30 percent of the site. In the UM and UC districts, it shall occupy no more than 24 and 20 percent,

respectively. One or more upper-level connections shall be required for moving between buildings without returning to the at-grade pedestrian precinct, by sky walkway or total floor connections.

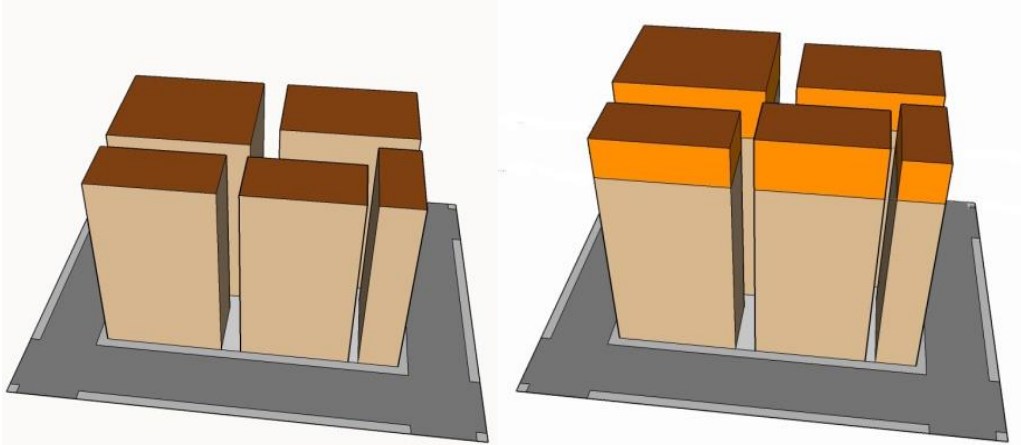


Figure 4.410A Showing block at maximum height and adjusted height to allow achievement of maximum floor area

- B. Windowed buildings as shown in Figure 4.410B are permitted when they occupy an entire block or larger unified development. They shall be permitted where the design provides greater interior connection, less elevator usage for interior circulation, or a greater mix of uses. An increased height is permitted to replace the floor area lost to the window or void and achieve maximum FAR.

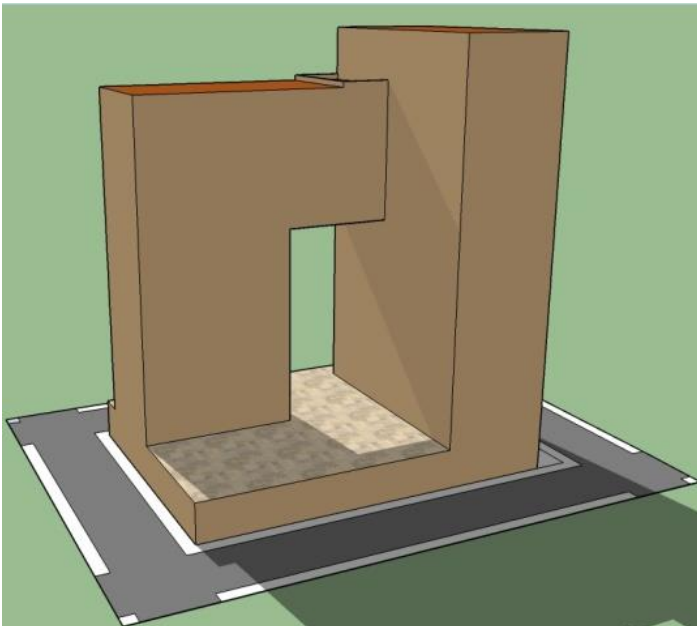


Figure 4.410B Building has a window or void, with floors above that connect building elements on either side of the window or void

- C. Upper-Level Building Connections. It is desirable to create upper-level connections between buildings to reduce the need to travel down elevators and enter another building at grade level to reach a nearby use. Such connections may cross streets, connect to adjacent buildings, or be part of a complex with connections designed from the start. Figure 4.410C illustrates a four-building connection. Where these

buildings share a site with a reduced footprint at grade or several floors above grade that prevents the maximum FAR from being achieved, relief should be granted in the same manner as in A or B above, as appropriate.

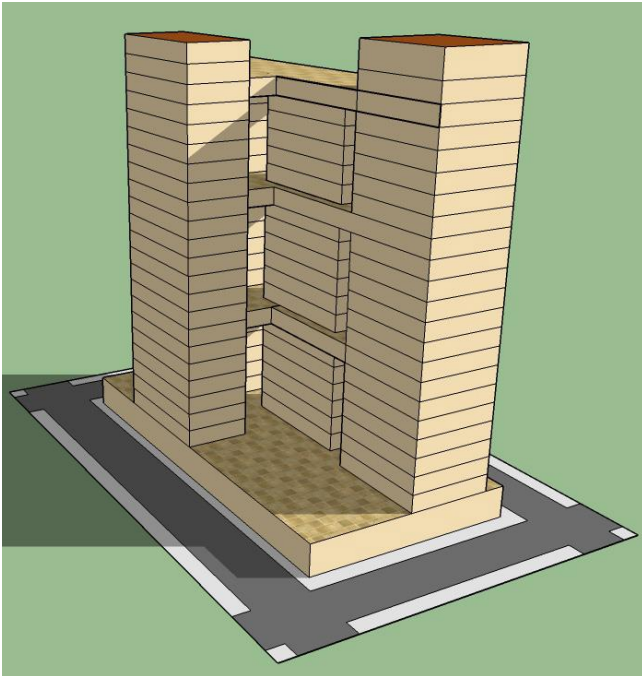


Figure 4.410C Four buildings showing multilevel connections which have open air and interior circulation

- D. Megastructure. An area of multiple blocks as a megastructure or connecting multiple structures above the pedestrian precinct level is permitted and encouraged. Division 11.500 provides rules for this type of development.

ARTICLE 5 RESOURCE MANAGEMENT

DIVISION 5.100 PURPOSE

Section 5.101 Purpose

{Sidebar}

This article provides innovative resource management approaches. This is particularly true of Divisions 5.300–5.600, which go beyond prior environmental regulations to address concerns regarding environmentally hazardous areas, including oceanic shoreline, that are expected to be underwater in 100 years, and to introduce sustainable elements to reduce carbon emissions.

{/Sidebar}

The protection of natural resources is addressed by Article 3, which sets forth a minimum open space ratio (OSR) to ensure the protection of a percentage of resources on each site. Certain uses are permitted on protected open space in accordance with the provisions of Division 5.200. Standards applying to alteration of wetlands and floodplains are found in Division 5.300. The oceanic shoreline refers to areas that will be submerged by rising sea level; new standards are presented in Division 5.400. Upland construction regulations are covered by Division 5.500, which sets standards for the protection of woodlands in fire hazard areas and other resources that are seldom addressed. Division 5.600 provides regulations that encourage more carbon-neutral development, promoting alternative energy generation and energy-conserving construction. Division 5.700 provides regulations governing acceptable levels of emissions from pollution sources including light and glare, noise, odor, dust and debris, hazardous waste, and radioactive waste. Divisions 5.400 and 5.600 have additional specific purposes as follows.

- A. Oceanic Shoreline. This applies only to the shoreline of oceans or rivers that are subject to tidal action. The rise of sea level is a major threat to millions of residents and, if not addressed, will result in enormous expenses. While sound planning would dictate 100 percent protection of the oceanic shoreline, few governments would adopt such a stringent standard. This division presents a range of options that will increase the protection of these areas, reduce risk, and lessen future losses.
- B. Carbon. The provisions of this division are intended to promote the generation of more power from sources such as solar or wind, and to reduce energy usage.

Section 5.102 Special Taxing Districts

A challenge to adopting strict environmental regulations preserving common open space has been fear associated with the management and maintenance of open space. A special taxing district provides the ideal tool to address these fears, eliminating concerns about the potential failures of a property owners' association to maintain development's infrastructure or open space, and the difficulty of using liens in enforcement. It ensures maintenance by taxing the property owners when there is a failure to maintain. Where specified in this article, a special taxing is required as a condition of subdivision or land development, reconstruction, and for the management of open space or other common elements. A second

purpose is to provide a means to shift the financial burden of cleanup, reconstruction, and emergency assistance from the jurisdiction to those who build or rebuild in areas where such damage will again occur.

- A. **Development Approval.** Approval of any development with open space or storm water management facilities shall be conditioned upon the development of a special taxing district that ensures open space or infrastructure maintenance, should a property owners' association fail to provide for such maintenance.
- B. **Insurance Coverage, Mandatory.** If it contains oceanic shoreline, floodplains, forest fire, landslide, or fault hazard areas, the special taxing district shall include insurance coverage as follows.
 - 1. **Cost of Structure.** Each homeowner shall have insurance covering the value of structure. It shall cover water, wind, fire, or other damage, such as from earthquakes, soil movement, or volcanic events, as appropriate to the area.
 - 2. **Infrastructure.** This insurance covers the cost of restoration, replacement, or removal of infrastructure, including roads, water, sewer, storm sewers, gas, electric, phone service, and other utilities.
 - 3. **Emergency Assistance.** This insurance is intended to reimburse local, state, or federal costs for post-event emergency assistance.
 - 4. **Replacement.** This is an optional item which provides funds for the rebuilding of a building on a safe site when subsequent damage occurs, and relocation to that site.
- C. **Jurisdiction.** The jurisdiction shall determine the potential hazards in all or part of the community. It shall then solicit bids from insurance companies to serve the jurisdiction. It shall review the bids to determine that all provide equal coverage for paragraphs B2 and B3 above.
- D. **Risk Assessment.** The insured items must be tailored to the risks in the community. For example, fire hazard insurance is not a substitute for normal fire insurance; it covers the widespread damage and cleanup the jurisdiction incurs associated with forest fires.

DIVISION 5.200 USES IN RESOURCE PROTECTION AREAS

Section 5.201 Uses Permitted on Protected Land

Tables 3.103A–C set the percentage of a resource area on a site that shall be designated as permanent open space. Some uses are permitted in the protected open space because they are generally compatible with the protection of resources, provide for the public's enjoyment of those resources, and provide some value to the landowners. Sections 5.202–5.204 provide standards for general open space, public ownership, and maintenance. Sections 5.205–5.215 cover the uses permitted on protected land and the standards for their development. Table 5.201 indicates the uses and whether they are permitted as limited or conditional uses. Limited uses need only meet the standards of this section. If the use is listed as conditional, the following standards shall be met.

- A. **Need.** It must be demonstrated that there is a public need to locate the use in the resource protection area and that it cannot be located elsewhere.
- B. **Alternatives.** It must be shown that the use or facility cannot be routed or located at another site that would result in less damage to the protected resources. It must also be demonstrated that the structure or site plan cannot be redesigned to reduce its footprint in order to preserve more of the resource.

B.C. Other Standards. It must be shown that the use meets all the standards of this division for that use.

Table 5.201 Permitted Uses or Activities in Protected Open Space											
Resources	Land Uses or Activities										
	Agriculture	Ball Fields	Courts	Golf	Picnic Area	Trails	Wind Turbines	Water Dependent Uses	Roads, Sewer, Water	Storm Water	Essential Access
Floodways				L		L		L	C		
Floodplains	L	L	L	L	L	L	L	L	C	L	C
Wetlands				L		L		L	C	L	C
Water Bodies							L	L	C		
Riparian Buffers	L	L	L	L	L	L	L	L		L	
Drainageways	L	L	L	L	L	L	L	L	L		
Oceanic Shore Line		L	L	L	L	L	L	C	C		
Beaches								L			
Woodlands, Edge				L	L	L					
Woodlands, Core				L		C					
Steep Slopes 15-25%				L	L	L	L		L		
Steep Slopes >25%				L		L	L		L		
Sand Dunes						L			C		
Bed Rock					L	L	L		L		
Sinkholes and Springs				L	L	L				L	
Unstable Soils						L			C		C
Slide Areas						L			C		C
Wellheads	L	L	L		L	L	L				

Section 5.202 General Common Open Space

Where open space is required to meet the standards of the district but not required to protect natural resources, the open space is referred to as general common open space. The following uses are permitted in such areas: ball fields, sports courts, golf courses, picnic areas, trails, agriculture or gardens, storm water management, and bufferyards, subject to plan approval (Article 12).

Section 5.203 Ownership and Maintenance

Open space or landscaped surface subject to resource protection must be owned by a property owners' association, the jurisdiction, a governmental agency, or other group that is set up so as to provide long-term maintenance of a natural area or space for agriculture, where permitted. Dedication is covered in Section 3.205.

Section 5.204 Agricultural Uses

The following resources may be used for agriculture, including field crops, orchards, vineyards, pastures, and structures essential to those uses, as follows.

- A. Floodplains. These areas may be used for agriculture, as provided below.
 - 1. A vegetative buffer of 20 feet from any stream, lake, or natural pond bank shall be established for the growing of any crop.
 - 2. Pasture is permitted where limited to no more than 0.5 animal units per acre. If grass cover cannot be maintained, the zoning officer may require animals to be taken off the pasture to allow recovery and a lower number of animals may be required after consultation with the Soil and Water Conservation District.
 - 3. Apiaries are permitted in the floodplain where the bottom of the hives is one foot or more above the .005 APS flood elevation and anchored to withstand flows in the area.
 - 4. No barns or other buildings may be permitted.
- B. Riparian Buffers. Where such areas are in grasslands or early stage of succession with woody plants no more than three feet in height, they may be cleared for agricultural use, following the standards in A above. No grove or group of trees with trunk diameters measuring greater than three inches Diameter at Breast Height (DBH) shall be cleared for agriculture, and those shall be left undisturbed when grasslands or old fields are cleared. These areas shall be fenced to keep animals out, if used for pasture.
- C. Drainageways. Agriculture is permitted provided there are no dikes and any stream channel is meandered to meet the standards of Section 5.309.
- D. Wellhead Protection. Pasture shall be prohibited within 100 feet of the well, and otherwise limited to no more than one animal unit per acre.

Section 5.205 Ball Fields

Ball fields (baseball, football, soccer, or other field sports) may be located in floodplains, riparian buffers, drainageways, and wellhead protection areas, but not in other resource protection areas. The following standards apply.

- A. Floodplains. Ball fields are permitted where they will not be flooded in a 0.2 probability storm.
- B. Woodlands. No woodland or grove areas shall be cleared.
- C. Cut and Fill. Cuts or fills shall be limited to a depth of no more than two feet over any five acres. A registered engineer shall certify that the cut and fill is balanced to retain existing storage capacity and flows.
- D. Drainageways. The provisions of Section 5.309 shall be met in drainageways.
- E. Oceanic Shorelines. Ball fields are permitted, provided they are at least 200 feet back from the high-water mark. No structure that will alter storm surge flows shall be constructed and no dunes or beach grasses shall be disturbed.
- F. Riparian Buffers. These may be permitted where they meet the criteria in B and C.

Section 5.206 Courts

Court games (tennis, volleyball, basketball, horseshoes, or similar games) may be provided in floodplains, riparian buffers, limestone, or wellhead areas, but not on other resource areas, subject to the following provisions.

- A. All. No uses requiring clearing of woodlands on these resource areas shall be permitted.
- B. Floodplain. Courts shall be made of pervious materials. Provisions for cleaning of sediments after flooding shall be required. Grading shall be designed to ensure there is no reduction in flood storage or change in flows and shall not exceed two feet of elevation. These can be designed so as to store additional water.
- C. Riparian Buffers. Courts may be permitted where there is no cut and fill greater than two feet across the entire court complex.
- D. Drainageways. The provisions of Section 5.309 shall be met, but courts may be built within the buffer area if they are designed to provide additional flood storage and meet the conditions of B above.
- E. Oceanic Shorelines. Court games are permitted, provided they are at least 300 feet back from the high-water mark and above current storm surge elevations. No structure that will alter storm surge flows shall be constructed and no dunes or beach grasses shall be disturbed. On broad beaches, beach volleyball is permitted to within 50 feet of the high-water mark. No grading shall be permitted.
- F. Limestone. Pervious pavement is encouraged for all courts. Any impervious court shall be reviewed to ensure that its location and drainage plan are designed to avoid infiltration concentrations that could lead to sinkhole formation.
- G. Wellhead Protection. Courts are permitted at least 50 feet from the well and its structures, provided the courts are fenced off with a six-foot chain-link or similar fence or wall and the owner permits.

Section 5.207 Golf Course

Golf courses are permitted in a variety of resource areas, provided the standards below are met.

- A. Maintenance. All golf courses shall submit a management plan for their maintenance. It shall provide best management practices to reduce nutrients, pesticides, energy, and water. The plan shall be reviewed by the planning director, urban forester, and engineer.

- B. Drainageways. Drainageways may be incorporated into a golf course's design as rough, provided the storage and drainage capacity are maintained or increased. Detention in drainageways is encouraged for use as a course's water hazard.
- C. Floodplain. The floodplain may be used for golf fairways, provided they are situated above the .1 APS-year flood frequency. All areas may be used as rough. Grading shall be designed to ensure there is a 10 percent increase in flood storage. Greens shall not be in floodplain areas where the .002 APS flood depth exceeds six inches prior to construction.
- D. Floodways. Golf courses may include floodways, provided no construction is permitted other than bridges, with no supports to be placed in the floodway. Approaches to bridges shall be at existing grade and construction shall meet the standards of Section 5.302. No more than one bridge shall be permitted per 18 holes.
- E. Wetlands. These may be preserved as a water hazard on the golf course, provided a rough using natural plant material is maintained for the surrounding 25 feet.
- F. Waterbodies. Waterbodies may be used as hazards, provided the shoreline is left in natural vegetation.
- G. Oceanic Shorelines. These are permitted, provided they are at least 300 feet back from the high-water mark. Temporary buildings shall be at least 500 feet back from the shoreline. No structure that will alter storm surge flows shall be constructed and no dunes, beach grasses, or wooded areas shall be disturbed.
- H. Riparian Buffers. These areas may be in rough, fairways, or greens, provided they respect any secondary requirement such as slope or woodland that is coterminous with the riparian buffer.
- I. Steep Slopes, 15–25 Percent. These may be incorporated provided grading is limited to cart paths. Grading shall be done in the growing season and turfed, or, if seeded, fully covered with mats.
- J. Steep Slopes, 25 Percent or More. These areas may be used only as roughs or hazard areas and left in natural vegetation.
- K. Edge Woodlands. Up to the outer 50 feet of an edge woodland area may be used as roughs or hazard areas, provided that clearing is limited to invasive plant species. Grubbing of shrubs is permitted where the jurisdiction's forester determines the canopy trees' health is not dependent on the shrub coverage. Existing ground cover shall remain as is, unless invasive.
- L. Core Woodlands. No clearing or grubbing shall be permitted for golf, even in the unprotected portion of core woodlands.
- M. Sinkholes and Springs. Fairways may occupy only the outer 100 feet of the protection area. Natural roughs are permitted, provided any wooded areas also meet H above. A nutrient management and grading plan shall be required and must provide maximum feasible protection of springs and the aquifer in order to be approved.

Section 5.208 Picnic Areas

Picnic areas are allowed on the following protected areas provided they meet these standards.

- A. Floodplains. Picnic areas are permitted, provided there is no filling and all structures are anchored to avoid being washed away. All structures should be at least 50 feet from any floodway. An occasional tree may be cleared in wooded floodplains, but not more than two per acre and only with the approval of the jurisdiction's urban forester as the least desirable trees to protect.

- B. Riparian Buffers. Picnic areas are permitted, provided any coterminous areas of steep slope or woodland meet the standards for those resources.
- C. Drainageways. Provided the drainage channel or low point is left clear, picnic areas are permitted, provided they are one foot above seasonal high-water mark.
- D. Oceanic Shorelines. Picnic areas are permitted under the following provisions.
 - 1. They shall be located at least 200 feet back from and at least two feet above the high-water mark and within 50 feet of an existing public street.
 - 2. No structures that will alter storm surge flows shall be constructed.
 - 3. No dunes or beach grasses shall be disturbed.
- E. Slopes, 15–25 Percent. Picnic areas are permitted, provided they are placed on pads created by cut and fill of no more than two feet with retaining walls limiting the area.
- F. Edge Woodlands. Picnic areas are permitted in edge woodlands, provided any clearing is limited as follows.
 - 1. Clearing is limited to underbrush, ground cover, and no more than one tree (of less than six inches DBH) per picnic area, where it cannot be avoided.
 - 2. Disturbed areas shall be limited to 2,000 square feet per acre of protected land.
- G. Bedrock. These areas may be used for picnicking, provided cut and fill is limited to three inches and stone used for retaining or boundary walls.
- H. Sinkholes and Springs. The picnic areas shall be located in the outer 100 feet of the protection area.
- I. Wellhead Protection. These areas may be used for picnicking, provided the agency owning the facility approves the setback of any structures and the protection provided for the wellhead area.

Section 5.209 Trails

Trails are permitted in most protected resource areas, provided they are limited to eight feet in width and are paved as indicated in the following paragraphs.

- A. General Paving. The paving shall be made of pervious material, either crushed limestone or woodchips. On slopes, steps shall be used to prevent erosion.
- B. Floodplains. Trails are permitted, provided they are located and designed to prevent scouring by currents.
- C. Wetlands. Trails shall be permitted only where needed to cross wetlands to unrestricted land or where used for education on wetland environments. They shall have boardwalks with a width of no more than five feet, except at viewing points. The boardwalks shall be constructed manually without heavy equipment.
- D. Floodways. Crossings are permitted via bridges, and construction shall meet the standards of Section 5.302. Floodways may also be crossed at existing natural fords, where depth warning markers shall be installed.
- E. Riparian Buffers. Trails are permitted, provided coterminous wooded or steep slope areas meet the standards of those resources.
- F. Oceanic Shoreline. Trails may provide access to beaches on the inshore portion of the shoreline. If crossing beach dunes or shore grasses, construction of a boardwalk with a maximum width of six feet

shall be required. Trails elsewhere are permitted, provided they are composed of compacted soil or woodchips.

- G. Drainageways. Trails may parallel or cross drainageways. Crossings shall be by bridge, boardwalk, or gravel ford.
- H. Slopes (All). Trails on slope areas shall be designed with occasional steps or other elements to prevent erosion of the trail. On steep slopes, stone or other stairs shall be used to ensure long-term stability. The routing of trails through these areas shall be designed to minimize erosion and maximize safety.
- I. Edge Woodlands. Trails shall be laid out to avoid damaging trees. The jurisdiction's forester shall approve the alignment and ensure that only small trees (less than six inches DBH) are cut. Invasive or low-quality trees may be removed where cutting is required.
- J. Core Woodlands. Trails may be permitted only for access in recreational or wilderness areas where intended to provide pedestrian, bicycle, horse, and firebreak access. For nongovernmental owners, the routing shall be reviewed and approved by the jurisdiction's urban forester as avoiding damage to trees. The forester may require a tree survey where tree cutting is proposed to determine the route with no cutting of healthy trees with a DBH greater than eight inches.
- K. Beaches. Trails for pedestrians are permitted where they are marked with sign posts every 400 feet or as necessary for visibility. Trails for horses or bikes shall be permitted only where shown on the comprehensive plan.
- L. Bedrock. Trails are permitted and should be laid out so as to avoid disturbing sensitive vegetation and use exposed bedrock wherever possible.
- M. Sinkholes and Springs. The trails shall be laid out to avoid approaching the edge of any sinkhole or spring, except as part of an approved plan for recreation or nature trails. Alignment shall avoid creating water flows into the sinkholes or springs that would carry pollutants or solids into these areas. In general, trails shall be pervious, except that impervious sections may be used near the edges of sinkholes and springs so as to control drainage and prevent erosion.
- N. Sand Dunes. Trails shall be boardwalks, except that in depression areas between dune lines woodchips may be used in those sections where slope does not pose an erosion problem. Trails shall be generally laid out so as to reduce erosion potential.
- O. Unstable Soils. Trails shall be limited to five feet in width. The engineer may require special engineering (dewatering, drainage, or structural elements) to ensure the trail does not contribute to slippage.
- P. Slide Areas. Trails shall be permitted only where access to the other side of the slide area cannot be achieved by realignment and approved as the safest crossing route by the engineer. Width shall be limited to five feet. Warning signs shall be posted to alert hikers of the risk of slides or avalanches.
- Q. Wellhead Protection Areas. Trails may be permitted, provided they are more than 15 feet from the wellhead and 25 feet from buildings.

Section 5.210 Wind Turbines

Wind turbines are desirable to reduce dependence on carbon-based energy. They can be located on open space with site locations in accordance with the standards in Article 2. The standards in this section cover whether and where they can be located on resource protection areas allocated for open space.

- A. General. Some resources not designated as core or edge woodlands have woodland cover on them. In no case shall any wind turbine site involve the cutting of protected trees for the site or access to it. No turbines shall be located in a scenic view area or corridor.
- B. Floodplains. Wind turbines may be located on floodplains, provided the towers are designed to be stable in flood events.
- C. Waterbodies. Wind turbines may be located in waterbodies only where the waterbody is entirely on the developer's land or where government controls the waterbody, subject to government approval.
- D. Riparian Buffers. These must meet the standard of paragraph A above.
- E. Drainageways. These must meet the standard of paragraph A above.
- F. Oceanic Shoreline. This use is to be encouraged as an alternative to other development on shorelines. The developer shall provide a study indicating the design of the towers, and power lines shall be designed to provide for continued safe operation after a 20-foot rise in sea level, including expected change to the sea bottom. The turbine sites shall be located at least 200 feet from property lines. Where located on a barrier island, the study shall take into account the potential retreat landward of the barrier island. All structures shall be engineered to the same specifications that would be required if they were to be sited in the ocean instead of upon currently dry land.
- G. Steep Slopes (15–25 Percent). Developers of windfarms often seek location higher than the surrounding land and building on steep slopes may be essential to achieving optimal locations. The developer shall submit plans showing that the wind turbines can be erected on the protected portion of the site with construction activities taking place on the unprotected portion of the site. Engineering plans must demonstrate that the construction shall be done in a manner that minimizes erosion and retains stability. No trees shall be cut for the site or for access to it.
- H. Bedrock. Plans for wind turbines on bedrock must meet the standards of paragraph A above.
- I. Wellheads. Wind turbine placements shall be approved by the operator of the well.

Section 5.211 Water-Dependent Uses

Water-dependent uses shall be located as approved by the jurisdiction, in locations that involve minimum dredging or other grading, whether above or below water, and provide access to waters of sufficient depth for the use. All buildings and structures shall meet the design standards of Division 5.300. All may also require approval of the US Army Corps of Engineers and/or the US Coast Guard.

- A. Dams. Water supply or flood protection dams shall be approved as a conditional use only after an environmental impact study.
- B. Docks. Individual private docks in a subdivision may be prohibited and a common dock required for the development. Both the location and length of any dock for marinas or launching ramp shall be limited so as not to create navigational hazards or collect debris. No dock shall extend into navigational channels.
- C. Commercial Piers. These shall be permitted only in heavy industry (HI) or port (P) districts. They shall also require Coast Guard and Corps of Engineers approval as to location and design in respect to providing for safe turning movements by vessels.
- D. Marinas. New marinas may be approved as conditional uses after an environmental impact study and approval by the Coast Guard and Corps of Engineers.

- E. Launching Ramps. It must be demonstrated that additional ramps are required. They shall be spaced at least one mile apart unless there is a topographic feature or development that makes closer spacing desirable and average spacing is maintained.
- F. Navigational Aids. Private navigational aids shall be placed with the approval of the Coast Guard or jurisdiction's law enforcement.
- G. Utility Intakes or Discharges. These shall be approved by the engineer.
- H. Public Beaches. The beach shall be left in a natural condition; importation of sand is prohibited. Beach re-nourishment is prohibited unless as part of a dredging project for lake or ocean access.
- I. Lifeguard and Beach Rental Stands. Lifeguard and beach rental stands are permitted. Such facilities shall be either readily movable or anchored to prevent movement during storms or flooding.

Section 5.212 Roads, Sewer, Water, or Other Utilities – Limited Use Approval

These uses can be located within the right-of-way of public or private roads in the development and thus should not be located on protected land. There are limited acceptable reasons for intrusion into protected areas.

- A. General. Where either the comprehensive plan or an approved environmental impact plan shows an extension or crossing, it shall be approved. The planning director and engineer may impose structural or design requirements that lessen disturbance or increase safety.
- B. Other Limited Approvals. The planning director shall determine all the following conditions are met.
 - 1. That a particular crossing of a protected resource is needed to reach an area of buildable land that must be used in order to achieve the maximum density permitted for the site in Division 3.200.
 - 2. That increased clustering cannot achieve the maximum permitted density.
 - 3. That a modification of the alignment to avoid disturbing protected areas is not feasible.
- C. Drainageways. Crossings are permitted, provided the drainage pattern is not interrupted and .005-frequency storm flows are maintained. Tree clearing shall be mitigated in non-wooded drainageway areas or riparian buffers on a one-to-one basis.
- D. Oceanic Shoreline. Roads shall be private and unpaved. No public water or sewer system shall be permitted. Where a crossing is made between areas outside the oceanic shoreline, it shall be treated as a floodway in terms of structural requirements.
- E. Edge Woodlands. A mitigation area shall be established on-site to replace all trees removed at a two-to-one ratio.
- F. Core Woodlands. A revised location shall be required that uses edge woodlands except for firebreak roads, which may be permitted where proposed by the regional fire management agency.
- G. Steep Slopes. All roads shall be designed to minimize intrusion into slope areas. The engineer and planning director may permit narrower roads and rights-of-way and mandate the use of retaining walls in order to minimize cut and fill that can destabilize the slopes. They may also require that utilities be run under the pavement, that sidewalks be only on one side of a road or in a separate right-of-way, or that slopes be dewatered to increase stability.
- H. Bedrock. The engineer and planning director shall determine that the alignment minimizes cut and fill and ensures that all fill areas are revegetated. The cuts shall be designed to avoid falling rock damaging vehicles or people. Netting or other measures may be required to provide protection.

- I. Limestone. No construction shall be done within 50 feet of any known sinkhole.
- J. Wooded Areas Coterminous with Other Resources. Any trees greater than three inches DBH shall be mitigated on a one-to-one basis on the site, as determined by the planning director.

Section 5.213 Roads, Sewer, Water, or Other Utilities – Conditional Approval

Crossing or disturbance of protected areas, other than that specified in Section 5.212, is undesirable and thus requires conditional approval. The conditional approval here is concerned only with the environmental impacts (wetlands and core woodlands) or threats to health, safety and welfare (floodplains, oceanic shorelines, unstable soils, and slide areas). The following findings must be made.

- A. Need. The need to cross protected resources must be shown.
 - 1. It must be proven that not having the connection will result in dangerous isolation, creating unacceptably low level of access for police, fire, or emergency service. OR
 - 2. It must be shown that utilities need the connection in order to provide dependable service, and that cannot be achieved by other improvements.
- B. Approval. Crossings of floodways, floodplains, waterbodies, oceanic shorelines, unstable soils, and slide areas must meet the following requirements.
 - 1. The crossing provides a second access to an area whose current access is endangered by a catastrophic event that would leave the area isolated without access for 21 or more days.
 - 2. The proposed access will not provide access to an undeveloped area whose sole access would be in danger of closing due to a catastrophic event and such closings could take more than 21 days to reopen.
 - 3. The crossing is essential for regional or interstate highway for which there is no alternative deemed practical after the completion of a federal environmental impact study.
- C. Wetlands. The route must receive Corps of Engineers approval.
- D. Oceanic Shorelines. Where new development requiring these facilities is going to be permitted by Division 5.400, all such facilities shall be private facilities, owned and maintained by the developer.
- E. Sand Dunes. The crossing of primary dunes shall not be approved. Crossing of secondary or tertiary dunes shall be permitted, provided the route selected is least damaging to the dune system, to reach the beach or other water-dependent use, and the design shall not allow storm surge waters to cross the dunes.

Section 5.214 Storm Water Facilities

The construction of storm water facilities, detention, retention, or access to those facilities shall meet the following requirements.

- A. Floodplains. Detention is permitted when it can be shown to increase storm water storage during a .002-probability storm by at least 10 percent. See Section 5.305.
- B. Riparian Buffers. Riparian buffers that are above the floodplain represent the low point on a site and are ideal for storm water protection.
- C. Wetlands. Wetlands are natural storage areas. Building a dam to increase area and volume of storage may be permitted in the following cases.
 - 1. It may be permitted where the wetlands are listed as farmed wetlands. OR

2. Where the wetlands contain a large amount of invasive wetland plants such as purple loosestrife, approval requires the removal of those plants. OR
3. Where the wetlands are evaluated as being of low quality, higher-quality wetland plants will be planted in the area to be inundated.

Section 5.215 Essential Access – Conditional Approval

Essential access applies only to development on one property where a buildable area of upland that is currently isolated by wetland or floodplain could support one or more dwellings. Permission is subject to the following requirements.

- A. Alternative Access. There is no alternative access that would not also require crossing the resource.
- B. Permitted Intensity. Where the proposed density can be reached on buildable land through more intense clustering without crossing the resource, permission shall be denied. If the maximum permitted intensity cannot be achieved without the crossing, the resource it shall be approved.
- C. Crossing Length. The shortest possible crossing shall be used.
- D. Design. The crossing shall be on structures that minimize damage to the resource. If adjoining properties have a similar condition, a common access shall be required with a stub to adjoining property.
- E. If less than six homes are to be served, the access shall be a gravel road no more than 12 feet in width.

DIVISION 5.300 CONSTRUCTION REGULATIONS FOR AREAS SUBJECT TO FLOODING

Section 5.301 Purpose

The purpose of this division is to provide construction regulations for uses permitted in floodways, floodplains, wetlands, and drainageways to ensure the health, safety, and welfare of persons or property on- or off-site. Division 5.400 addresses areas subject to flooding or inundation from oceans.

Section 5.302 General Floodways and Floodplain Standards

Any construction permitted in Table 5.201 in floodways and floodplains shall meet the following standards.

- A. General. Most actions in floodways require Corps of Engineers and often Coast Guard approval in addition to jurisdiction approval. These shall be a condition of any jurisdiction approval. Where this code provides stricter standards for approval, these stricter standards shall apply even if the agencies have granted approval.
- B. Anchoring. Any structure in the floodway shall be engineered and anchored to prevent collapse, erosion, lateral movement, or flotation of the structure. The engineering shall take into account the following: stream velocity, currents, tides, debris, ice, and the underlying soils and geology.
- C. Elevation. All floors, horizontal structural elements, electrical, heating, air conditioning, ventilation, sanitation, and other utilities shall be located three feet above the .002 probability flood elevation. Where crossing a floodway, the clearance shall be five feet above the .002 probability flood elevation.
- D. Bridges. Bridges shall have spans that keep the floodway clear of vertical supports, except where a movable lift or drawbridge is required for shipping. The lower portion of the bridge structure shall be

at least 10 feet above the .002-probability flood elevation. The Coast Guard may require higher elevations for navigation.

- E. Dams. Dams shall be designed for .001-probability storm events. There shall be five feet of freeboard at the .001-probability flood elevation. Spillways that are not concrete or excavated in rock shall be designed to resist erosion during maximum release. The shorelines at the lower end of the spillway shall be designed to spread the water and preserve stream banks during these events.
- F. Piers and Navigational Structures. All piers and navigational structures shall have shutoff valves or switches and pumps to safely avoid spills or damage during major storm events. Electrical, water, and sanitation facilities shall be as high above water level as is consistent with the boats to be moored. Floating structures shall have an additional anchoring plan approved for deployment in advance of major flood crests to prevent them from breaking loose.
- G. Existing Structures. In the floodway, only water-dependent uses may be rebuilt if damaged, and the engineer may require elevation or other changes to reduce damage potential. In the floodplain, any existing structure that is flooded and damaged by more than 50 percent or has been flood damaged more than five times shall be condemned and removed.
- H. Fills and Detention. Fill is controlled by Section 5.304 and detention by Section 5.305.
- I. Land. Land that is washed away in a storm event and/or channel change shall not be filled but shall be left at its post-event elevation, except that dredging for channel navigation may be done if approved by the Corps of Engineers and/or Coast Guard.
- J. Beneficial Use. Uses that are permitted at a beneficial use hearing (Sections 16.305–16.309) may be habitable, but each unit shall comply with all structural standards of this section.
- K. Insurance. All new development or subdivisions in the floodplain shall have a special taxing district created or join an existing one as specified by Section 5.102, with flooding and relocation provisions.

Section 5.303 Shallow Floodplains

{Sidebar}

This section is optional. While not optimal, it recognizes that some communities have very large, shallow floodplains and politically cannot adopt the regulations that prohibit development. This section provides language for such situations. It is recommended that jurisdictions consider a large-scale de-channelization plan (Section 5.306) to provide development, rather than this section.

{/Sidebar}

Development in floodways and floodplains is limited to those uses permitted in Table 5.201, except in areas of shallow floodplains where subdivisions or other land development may be permitted, subject to this section. The standards here protect property and life from damage without obstructing the flow of storm water or increasing flood levels. The provisions of this section permit development of commercial or residential uses in a zoning district's areas of shallow floodplain.

- A. Shallow Floodplain. The jurisdiction shall prepare a map showing all areas of shallow floodplain where there are at least 200 contiguous acres of floodplain with a flood depth of no more than one foot during a .01-probability storm event.

- B. Woodlands. If parts of the shallow floodplain are also woodlands, the development shall protect those portions as woodlands.
- C. General. All residential or commercial development shall meet the anchoring standards of Section 5.302. The development must either be on fill approved as part of a de-channelization project or be elevated on stilts.
- D. Stilts or Piers. On the fringe of a shallow floodplain area, residential or nonresidential development otherwise permitted in the zoning district may be built, provided the following standards are met.
 - 1. The bottom of all habitable structures shall be three feet above the .002-probability floodplain.
 - 2. The development shall have automobile access that is a minimum of three inches above the .002-probability floodplain to ensure emergency access during storm events. Where automobile access is within the floodplain, stilts or piers shall be used to elevate the road access, so it is a minimum of three feet above the .002-probability floodplain.
 - 3. Underground utilities shall be designed to have access that is three feet above the .002-probability floodplain in order to prevent both the pollution of drinking water and flows to sewer plants that are beyond plant capacity.
- E. Existing Structures. Any existing structure that is flooded and damaged by more than 50 percent or has been flooded or damaged more than five times shall be condemned and removed unless the landowner can elevate the structure as specified in D above.
- F. Land. Land washed away in a storm event shall not be filled but shall be left at its post-event elevation.
- G. Beneficial Use. Uses that are permitted at a beneficial use hearing (Sections 16.305–16.312) may be habitable, but each unit shall be elevated on stilts or piers as specified in E above.
- H. Insurance. All development or subdivisions in the floodplain shall have a special taxing district created or join an existing one, as specified by Section 5.102, with flooding and relocation provisions.

Section 5.304 Fill in Floodplain

Filling reduces the storage capacity of floodplains and shall be permitted only for water-dependent uses where elevation on pilings is not practical or would hamper operation of the water-dependent use. The conditions and standards of this section shall be met in approving all fill applications.

- A. Shallow Floodplains. Fill is permitted in shallow floodplains, only where approved under Section 5.303 and Section 5.306. Areas filled to at least three feet above the .002 probability floodplain may be subdivided and developed once they are approved as no longer being in the floodplain.
- B. Fill Less than 18 Inches. The jurisdiction's engineer shall approve all fills meeting the standards of this section where the depth of fill is less than 18 inches, provided that compensatory storage is provided and pipes or elevated sections installed to prevent an increase in flood elevation upstream of the fill.
- C. Fill Greater than 18 Inches. These shall require a conditional use permit as a water-dependent use (Section 5.211) and in 5.305 below.
- D. Impact. The result of any fill shall be an increase in upstream or downstream flood elevation of no more than one tenth of an inch off-site.
- E. Compensatory Storage. There shall be new flood storage created for each cubic yard of fill installed below the flood elevation, at a ratio of 1.25 cubic yards of storage for each cubic yard of fill.

Section 5.305 Detention in Floodplain

Detention in the floodplain is difficult because the water table may be at the surface of the ground. It may be approved, provided the following requirements are met.

- A. Depth to Water Table. The available storage capacity is the volume of excavation above the seasonal high-water table. On-site soil data from a certified soil scientist is required prior to approval.
- B. Impact. The engineer shall determine that upstream and downstream flood elevations are either decreased or at least not increased.

Section 5.306 De-Channelization

De-channelization may be used in a shallow floodplain to increase its storage capacity and resulting fill may be used to elevate areas above the revised floodplain (Figure 5.306). The following standards apply to this type of detention and to the alteration of the floodplain elevation.

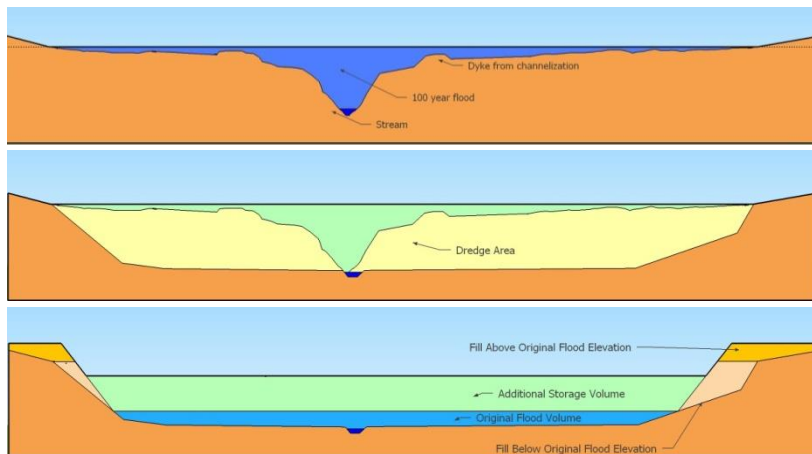


Figure 5.306 De-channelization

Top - Natural stream cross section

Middle - Excavated area

Bottom - Adjusted floodplain with additional storage capacity and fill locations

- A. Area. De-channelization shall be permitted only on sites with 100 acres of floodplain. The jurisdiction shall encourage adjacent landowners with shallow floodplains to join in the de-channelization.
- B. Survey. The site shall be surveyed to provide analysis of cross sections, the depth of the bottom of the stream channel, top of bank, any fill areas, flood elevation, and seasonal high-water table. A cross section shall be prepared every 300 feet.
- C. Woodlands. No area of the existing floodplain that would also qualify as a woodland may be included in the de-channelization project.
- D. Excavation of Stream Channel. The stream channel bottom shall be lowered and widened through excavation as follows.
 - 1. Any fill from the original channelization of the stream shall be removed.
 - 2. The excavation shall lower the channel bottom at least one foot on the within the boundary of the project.

3. The channel may be lowered below the water table for sections that allow the water quality to be improved with pools and riffles (Section 14.513D).
 4. The channel length should be increased by creating meanders or oxbows. The goal is to increase channel length by a minimum of 100 percent.
- E. New Cross Section. The new cross section shall satisfy the following requirements.
1. A calculation of the new .005- and .002-probability flood elevations shall be submitted.
 2. The area of the new cross section shall be a minimum of three times the current cross-sectional area below the present floodplain elevation.
 3. The fill created from the excavation shall be placed along the fringe of the original floodplain and installed to a height of at least three feet above the new .002-probability flood elevation for development.
- F. Off-Site Impact. No flood elevations or peak flows shall be increased either upstream or downstream of the de-channelization project.
- G. Revised Floodplain. The new cross sections, fill, and newly calculated .005- and .002-probability flood elevations for all revised sections of floodplain shall be submitted to the Federal Emergency Management Agency (FEMA) for approval and provision of a new flood map.

Section 5.307 Waterbodies

Only water-dependent uses shall be permitted within waterbodies and they shall meet the standards of Section 5.211 for water-dependent uses and Section 5.302 for floodways. Where the waterbody is an artificial pond, its shoreline may be altered, provided the original area is retained or increased for design or storm water management purposes. The following additional controls apply.

- A. Piers may be extended from shore no more than 8 percent of the width of the pond or 30 feet, whichever is lesser.
- B. Where development faces the pond, water quality shall be evaluated, and aeration may be required.

Section 5.308 Wetlands

Only uses permitted in Table 5.201 shall be permitted. Where boardwalks are proposed, to the maximum extent feasible, it shall be constructed by hand rather than by use of mechanical equipment. Permits from the Corps of Engineers shall be obtained.

- A. Water-Dependent Uses. Before water-dependent uses are permitted to be built in wetlands, there shall be a study showing that the location minimizes the destruction of the wetland, or that there is no other feasible site within one mile.
- B. Farmed Wetlands. Because wetlands are natural storm water basins, farmed or low-quality wetlands may be altered for storm water detention provided the following requirements are met.
 1. An earthen dam and spillway either adjoining or in the wetland shall be constructed to raise the elevation of water in the wetland in order to provide storm water storage above the existing high-water mark.
 2. Any fill in a wetland shall be to contain the storm water facility on the property being developed. The detention shall be sized so as to provide additional storage capacity that is at least two times the fill area required for the dam.

- C. Plants. A wetland specialist shall determine whether existing wetland plants are likely to migrate with the water level change and approve wetland planting to compensate. Providing open water is considered beneficial. Invasive wetland plants shall be removed.
- D. Small Isolated Wetlands. Because scattered wetlands are poor habitat, in nonresidential, commercial, office, or industrial developments, these may be filled or otherwise modified in accordance with the following requirements.
 - 1. The individual wetlands are less than two acres in area and are scattered, making the development inefficient.
 - 2. The wetlands cannot be easily linked for storm water management purposes.
 - 3. In addition, modifications shall meet one of the three following requirements.
 - a. One or more on-site wetlands shall be expanded or combined to provide an increase in area of 1.2 times that of the filled wetland(s). OR
 - b. A wetland that includes open water at least 1.3 times the size of the area filled constructed to replace the filled wetlands and provide storm water management. OR
 - c. A certified wetland mitigation area at least twice the size of the area disturbed is available, and there shall be a contract with a certified wetland organization to maintain the wetland for eight years to ensure quality.

Section 5.309 Drainageways

Prior to construction, the developer shall determine current flood storage potential for a .005-probability storm event and increase in runoff as part of the storm water management plan for the proposed development. The construction shall meet the following standards.

- A. Storage Area. The new storage area shall be at least 125 percent of the current one. It is recommended that drainageways be at the location of storm water management facilities for the site.
- B. Water Course. Where flow volumes warrant a stream channel, it shall be a meandered channel with a length at least 20 percent greater than the current length.
- C. Landscape. The area on either side of the channels shall be restored to a natural grassland or planted to restore a woodland.

DIVISION 5.400 OCEANIC SHORELINE

{Sidebar}

This division applies only to jurisdictions that front on oceans, bays, or rivers that are subject to tidal action. These regulations are intended to supersede floodplain regulations within the boundaries of the oceanic shoreline because they account for sea-level rise. Ideally, all new development should be prohibited in the oceanic shoreline, but this is politically difficult. This division provides strong post-storm event regulations (Section 5.404) that all jurisdictions at oceanic sea level should adopt in order to minimize future damage in these areas. Other sections show alternative approaches to limiting development and lowering the value that is lost in storms or as sea level rises. There are provisions that address different types of land and protection. Development options range from alternative zoning and subdivision standards (Section 5.406) to alternative development types, including caisson development, megastructure development, megastructure redevelopment, and adjustments to permitted unit size (Sections 5.407–5.411).

{/Sidebar}

Section 5.401 Oceanic Shoreline Purpose

This division applies to land subject to flooding, storm surge, and sea-level rise on oceanic shorelines. Protection standards are based on a projected sea-level rise of eight feet over 2018 levels. This minimum assumption shall be increased to account for local storm surge, tidal conditions, likelihood of tsunami events, and rising or sinking geology. Sea-level rise permanently inundates land. Flooding is temporary: the water drains, leaving dry land. With sea-level rise, the result is that dry land becomes sea bottom. While beach re-nourishment can restore the land from a single storm event, it is not a solution for sea-level rise because the restored beach again will be submerged or eroded. Barriers such as dikes may protect against sea-level rise but are very expensive. Sea-level rise causes the destruction of private property and public infrastructure. In addition to the loss of property, there are the costs of cleanup of collapsed or abandoned buildings and infrastructure. The potential loss in properties and relocation cost is far greater than from other disasters.

Section 5.402 Shoreline Adjustment

Sea-level rise is expected to continue for several hundred years even if carbon levels and temperature are stabilized. Thus, the oceanic shoreline elevation based on a 100-year projection will have to be periodically revised upward. The jurisdiction, in consultation with the Corps of Engineers and the National Oceanographic and Atmospheric Administration (NOAA), shall revise the oceanic shoreline elevation every 25 years.

Section 5.403 Shoreline Types

All sections of shoreline are to be classified as stable, weakly stable, unstable, protected, or shoreline cliff. The unstable and weakly stable areas are most severely limited in allowable use. Property owners in stable shoreline areas have more development options and protection may be less costly. For shoreline cliffs, the primary control is setbacks that protect against shoreline recession or collapse.

Section 5.404 Post-Storm Event

This section deals with preexisting development (built prior to the adoption of this ordinance) in all oceanic shoreline types. Because these areas will ultimately be inundated by sea-level rise, normal rebuilding after a storm event is undesirable because the site will ultimately be submerged and, if rebuilt, damage will occur again. If the lots, buildings, streets, or infrastructure are damaged by wind, water, or storm surge, the jurisdiction and state and federal government will be forced to expend substantial funds in emergency relief. Redevelopment or repair creates new potential losses. The jurisdiction shall therefore conduct a post-disaster study that takes the following actions.

- A. General. The study shall determine the new mean high-tide line after a storm event's erosion on all lots. Lots eroded by storm events shall remain buildable only if the remainder of the lot meets minimum area requirements for the district, has access to a public street, and meets minimum setbacks from the new shoreline. Such lots may not be filled to restore the shoreline nor shall any construction

to armor the shoreline be permitted. Areas of accretion shall be considered jurisdiction land and not added to lot area as they will eventually be underwater.

- B. Roads and Utilities. The study shall assess the status of roads and utilities and identify those that have been undermined or structurally damaged. Those that are generally parallel to the shoreline shall be abandoned. Where they are generally perpendicular to the shoreline, they shall be abandoned and utilities and access relocated to a street that is undamaged, except that pedestrian shoreline access shall be retained.
- C. Condition of Buildings. The study shall determine the condition of all buildings on damaged roads or connected to damaged utilities. The buildings shall be classified as follows: undamaged; damaged less than 20 percent, none of which is structural; and more extensively damaged.
- D. Building Damage History. The study shall determine whether the buildings have been damaged by flooding, storm surge, and/or wind in the last 25 years.
- E. Regulations for Buildings. The following rules shall govern repair and reconstruction.
 - 1. Demolition. Buildings with structural damage on lots that no longer meet minimum standards above the new mean high-water line shall be demolished and not replaced.
 - 2. Allowable Rebuilds. Buildings suffering water and/or wind damage of less than 20 percent may be rebuilt if they are currently sufficiently elevated or shall be raised to meet the requirements of paragraph 5 below.
 - 3. Lots on Abandoned Streets. When buildings are undamaged or eligible for reconstruction, if the streets and/or utilities are being abandoned, property owners may use an existing right-of-way to reach and/or connect utilities to their units. The jurisdiction will not maintain the right-of-way. If the public water or sewer systems are damaged, the jurisdiction may abandon them. If abandoned, the owner(s) shall pay for connections with remaining water and sewer lines or shall install storage tanks sufficient to store a minimum of three days' supply of drinking water and a septic holding tank, all at their own expense.
 - 4. Anchoring. Any new or reconstructed structure in the oceanic shoreline shall be engineered and anchored to prevent collapse, erosion, lateral movement, or flotation of the structure. The engineering shall be such to allow anchoring measures to safely withstand the velocity, currents, wave action, debris, ice loadings, and storm surge associated with an eight-foot sea-level rise. The jurisdiction shall determine whether similar structures along similar sections of shoreline have been damaged in a storm event. If they have, the jurisdiction may require much more substantial engineering for any new or reconstructed structures in order to meet this standard.
 - 5. Minimum Building Elevation. All floors, structural elements, and electrical, heating, air conditioning, ventilation, sanitation, and other utilities shall be located two feet above the oceanic shoreline elevation.
- F. Relocation. All relocation sites for existing structures and proposed sites for replacement buildings shall be at least 15 feet above the oceanic shoreline elevation to minimize the possibility of future inundation from sea-level rise.
- G. Special Taxing District. A special taxing district (Section 5.102) shall be created that covers all blocks with damaged structures, streets, or utilities. Any buildings repaired or reconstructed, and any buildings on abandoned streets, shall become part of a special taxing district as a requirement for

construction permits and occupancy. Undamaged buildings within the damaged area shall also be part of the special taxing district.

- H. Protected Shoreline. If a post-disaster plan to create a protected shoreline area is approved, nonconforming rules (Article 7) regarding damaged buildings shall apply within the protected area.

Section 5.405 Infill Development

{Sidebar}

This provision offers a means to ensure that the owner of an existing lot is not denied the rights to build on his or her land in cases where adjoining land is developed.

{/Sidebar}

Infill is development on existing lots in a subdivision where other lots are developed. All buildings shall meet the following elevation and structural requirements.

- A. Elevation. Buildings shall be elevated on stilts or pilings. All floors, structural elements, electrical, heating, air conditioning, ventilation, sanitation, and other utilities shall be located two feet above the oceanic shoreline elevation.
- B. Anchoring. Infill structures shall be engineered and anchored to prevent collapse, erosion, lateral movement, or flotation of the structure. It shall be engineered to safely withstand the velocity, currents, wave action, debris, ice loadings, and storm surge associated with an eight-foot rise in sea level. If the jurisdiction engineer determines that similar structures were damaged in prior storm events, more substantial engineering shall be required.
- C. Maximum Unit Size. To reduce emergency relief, cleanup, and ultimate relocation costs, the unit shall be limited in size to a maximum of 1,200 square feet or 40 percent of the size of existing units located within 200 feet, whichever is greater.
- D. Multiple Lots. The owner of multiple adjoining lots shall combine them into a single lot and be able to build a dwelling of 1,200 square feet plus 200 square feet for each lot over two combined.

Section 5.406 New Subdivisions or Land Developments

{Sidebar}

This section allows some development in areas projected to be submerged. The standards are intended to either ensure that structures survive up to an 8-foot sea-level rise or to greatly reduce the potential losses.

{/Sidebar}

New subdivisions or land developments shall follow the rules of this section.

- A. Unstable Shorelines. Unstable areas are subject to erosion and loss from storms and will be submerged with sea-level rise. New developments or subdivisions are prohibited except as follows.
 - 1. Land developments following the megastructure provisions of Section 5.410 are permitted.
 - 2. Communities with water-dependent uses, such as fishing communities, may be developed as caisson communities (Section 5.407).

- B. Weakly Stable Shorelines. Developments are permitted as in unstable shorelines in A above or where they are protected as in C2 below.
- C. Stable Shorelines. In these areas, new development is prohibited unless the developer or jurisdiction takes land out of the oceanic shoreline by using one of the techniques below.
1. The area shall be filled to five feet above the oceanic shoreline elevation. Such fill shall be protected with an approved armored shoreline, dike, or seawall that protects the fill from storm surges and wave action. OR
 2. Construction of floodwalls or dikes shall be permitted where they meet the standards of this subsection.
 - a. Dikes or floodwalls shall be provided to protect stable or weakly stable areas from flooding. The structure shall have three feet of freeboard over the oceanic shoreline elevation.
 - b. They shall be designed to withstand wave pressures during a storm surge, category 5 hurricane, or tsunami.
 - c. Initial designs shall include plans for additional construction that will allow the structure to provide protection for a sea-level rise of 20 feet. If that cannot be done, the plan shall provide for the establishment of a fund to allow for the removal of buildings and relocation of residents when sufficient freeboard cannot be maintained.
 - d. All such facilities shall have engineering that assesses the infiltration of sea water through the soils and provides pumps and power sources to maintain pumping during storm events. On-site solar and wind power shall be encouraged as the primary power sources.
 - e. Protective structures shall be designed so that storm surge or waves will not be directed to other properties or raise the oceanic shoreline elevation by more than one inch due to changes in currents, waves, or displacement caused by those structures.
 - f. Anchoring. The protective barrier or an elevated building pad shall be anchored to the bedrock or other construction so as to prevent undermining or breaking free due to wave action.
 3. Stilts. Buildings may be elevated on stilts where the ground is no more than two feet below the oceanic shoreline elevation. They shall be elevated to at least five feet above the oceanic shoreline elevation.
 4. The Corps of Engineers shall approve and issue permits for the creation of the protective structures and certify that they have been successfully completed.
 5. Maintenance. All development or subdivisions in areas removed from the oceanic shoreline shall have a special taxing district created or join an existing one as specified in Section 5.102 in order to provide regular maintenance of the structures and prevent structural failure.

Section 5.407 Caisson Communities

Caisson communities are intended to provide for the development of a community where the residents' occupations are water-dependent, such as fishing or servicing offshore facilities. This provision is intended to allow the community or subdivision to be designed with a common structure capable of being raised as sea level rises or of being relocated, in whole or in part. Rather than configured as a collection of buildings on stilts, such a structure is placed on pylons with a common deck (Figure 5.407). This is intended to

provide resistance to erosion, wave action, or wind damage by having a stronger, common platform structure. The following are the criteria that must be met for approval.

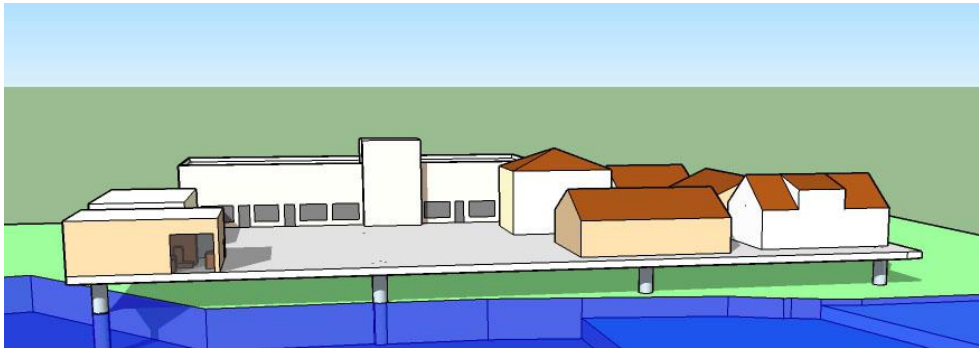


Figure 5.407 Caisson community on a common platform

- A. Water-Dependent. The community's economy must be water-dependent. Recreational communities are not permitted unless they are on a waterway suitable for boating. Limited businesses that support the community are permitted.
- B. Location. The community must demonstrate that there are no other locations with water access, land above the oceanic shoreline elevation, and similar transit distances that would preserve its ability to conduct its business.
- C. Platform Construction. The community must be elevated on a platform that is sunk into the soil and/or otherwise anchored on a regularly spaced set of caissons that support the deck upon which the homes and businesses are located. The platform, with or without the caissons, shall be designed to be floated and moved to alternative locations when sea-level rise forces this.
- D. Anchoring. The structure shall be anchored to resist movement, damage, or collapse from wind, waves, and storm surge of a category 5 storm and an eight-foot rise of sea level.
- E. Elevation. The bottom of the platform structure shall be a minimum of five feet above the oceanic shoreline elevation or designed to be raised to that level.
- F. Piers or Dockage. These shall be designed to be safely secured from breaking loose during storm events to prevent structural damage. There shall be plans that provide for securing boats during these events or moving them to safety.
- G. Vehicular Access. It is recognized that vehicular access may be lost during storm events or high tides and that caisson communities may be permanently isolated from land access by sea-level rise. The community must have boats capable of providing communication and community support for temporary or permanent loss of land access. There shall be a vehicular elevator that brings vehicles up to deck level to prevent storm losses. Emergency power shall be available to supply the community for a period of 30 days. Water and sewerage systems shall be located to function above water level.
- H. Insurance. All caisson-type communities shall have a special taxing district created or join an existing one as specified in Section 5.102.

Section 5.408 Megastructure Development

Megastructure development is permitted in the oceanic shoreline (other than cliffs) only where there is a means to ensure the development is located and constructed so that it will not be inundated by an eight-foot sea-level rise. The standards dictate that the development be placed and constructed so as to remain structurally sound during category 5 hurricane events, with minimal losses to buildings and people. The following standards control megastructure development.

- A. **Setback.** The buildings shall be set back a minimum of 1,000 feet from the mean high-water level except where there are areas on the site higher than the elevation at the 1,000 foot line. The minimum setback at higher elevations shall be a minimum of 250 feet. Figure 5.408A illustrates the standards.
- B. **Minimum Site Area.** The minimum site area is 100 acres.
- C. **Megastructure Design.** The megastructure shall be designed with a pedestrian precinct upon which all habitable buildings and mechanical equipment are located (Figure 5.408B). The pedestrian precinct shall be a minimum of six feet above the oceanic shoreline elevation. The entire underlying structure of the pedestrian precinct shall be designed to resist storm waves and avoid being undermined. Piles or caissons shall be provided below the exterior walls of the pedestrian precinct to ensure resistance to damage during a category 5 hurricane. Engineering drawings shall be signed and sealed by a registered engineer with expertise in the design of structures in a marine environment and approved by the jurisdiction engineer.

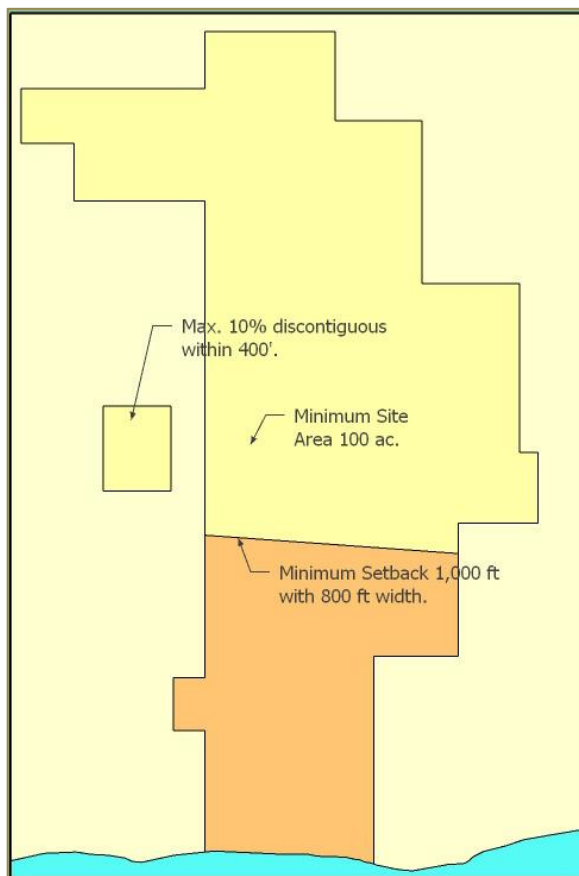


Figure 5.408A Site requirements for megastructure development on unstable oceanic shorelines

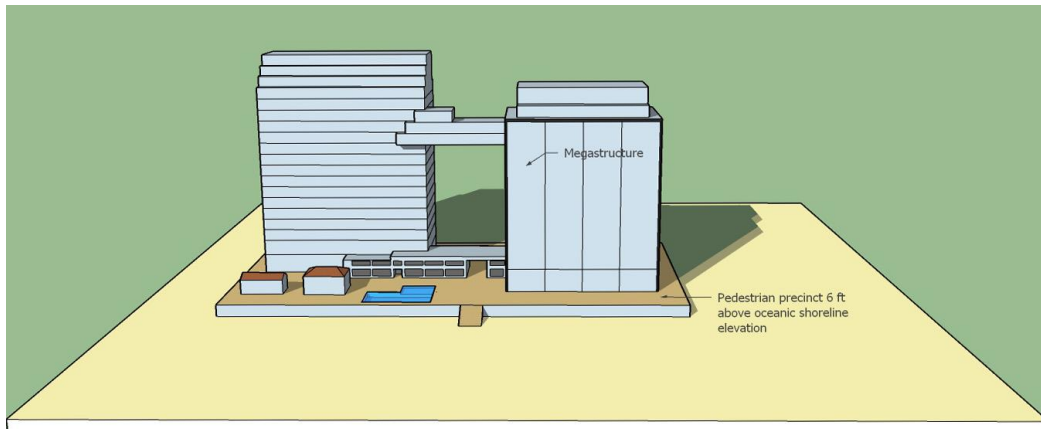


Figure 5.408B Megastructure of multiple buildings on a pedestrian precinct

- C.D.** Habitable Floors. No habitable floors or electrical, or mechanical equipment shall be located below the pedestrian precinct level unless they are sealable from water intrusion by watertight doors at the pedestrian precinct level.
- D.E.** Building Design. One or more buildings may be built on the pedestrian precinct. While interconnection is desirable, it is not essential as long as the integrity of the pedestrian precinct and structure as a functioning unit is maintained.
- E.F.** Intensity. The developments shall have 94 percent open space with a maximum floor area ratio (FAR) of 0.118. This permits .02 of the site to be in the pedestrian precinct and used as open pedestrian areas or lower buildings. This assumes an average building height of 12 stories with ground-floor commercial. This is a residential density of about four dwellings per gross acre.
- F.G.** Temporary Outbuildings. The development may use temporary outbuildings to provide a more desirable beach experience for residents or visitors. See Section 5.409.
- G.H.** Special Taxing District. At the time of development approval, a perpetual special taxing district shall be established as specified in Section 5.102.

Section 5.409 Temporary Buildings

To allow some new megastructure developments to have beach front uses, temporary buildings may be permitted for commercial uses.

- A.** Megastructure Development. Temporary outbuildings shall be permitted on no more than 0.25 percent of the site. They shall be located behind existing dunes or 200 feet from the mean high-water line. These uses can include restaurants and beach accessory sales. All such structures shall be mobile with wheels in place so that they can quickly be towed away prior to a storm event. The developer must provide towing vehicles, trained staff, and an approved plan for the moving of temporary buildings. There shall be a storage site for these temporary buildings in an area at least one foot above the oceanic shoreline elevation, provided with tie-downs to protect from wind damage.
- B.** Beach Equipment. The jurisdiction or developer may provide beach rentals and lifeguard chairs or stands in the oceanic shoreline. There shall be a plan approved for securing all this equipment in existing structures in the oceanic shoreline prior to a storm event.

Section 5.410 Megastructure Redevelopment

{Sidebar}

This section is designed to cover currently developed areas where most of a community or its neighborhoods will eventually be submerged by rising sea level, with, at minimum, street levels being underwater, and the area cannot be protected by structures.

{/Sidebar}

Much of the oceanic shoreline is currently developed and these areas will have to eventually be either abandoned or redeveloped. Since sea level will likely rise for hundreds of years, simply raising individual structures or streets is a temporary solution that will ultimately fail. Redevelopment using megastructures provides a longer-term solution by elevating the entire area above long-term sea-level rise (Figure 5.410). Such megastructures must raise the pedestrian precinct above the reach of a 100-year sea-level rise, as provided by Division 11.500. The following regulations modify the standards of Division 11.500.

- A. Planning. The plan must provide for a sea-level rise of 32 feet, four times the projected 100-year sea-level rise used elsewhere in this division. The additional height permits the designed flooding of several floors as sea levels continue to rise. The plan shall also include how the area will be connected to transportation, fresh water, sewerage, electricity, and other infrastructure that is above the 32-foot sea-level rise. The Corps of Engineers and the state planning agency shall review and approve these plans. The plan shall provide funding for the megastructure development's connections to areas above the long-term sea-level rise or to have self-contained water and sewer and access by boat. Phasing shall provide starting locations and a timeline for areas to either attach to the megastructure pedestrian precinct or be excluded.



Figure 5.410 Redevelopment of megastructure after sea-level rise covers initial land surface

- B. **Structural Standards.** The base of the megastructure will ultimately be underwater. The structure shall be anchored to bedrock or at depths that ensure it will not be undermined and will withstand the wave action and winds of a category 5 hurricane. This includes open areas between elements that may become open water.
- C. **Lower Level.** Lower floors must be designed to be abandoned as sea level rises above the oceanic shoreline elevation. This can be done by sealing these floors to occupancy or by strengthening them to anchor the building below sea level.
- D. **Wave Protection.** The design shall include structures to protect foundations from direct wave action and undermining as sea levels rise. These can include artificial reefs or structures that maintain a bottom gradient to protect the walls. These may be designed to be incrementally constructed as sea level rises. Initially, there may be a beach in front of the megastructures.

Section 5.411 Unit Size

{Sidebar}

This approach is designed for jurisdictions that are unwilling to use Sections 5.408 or 5.410 but are concerned about reducing potential losses from new construction. The standards of this section reduce the maximum size of units, allowing small summer homes rather than very large homes that result in huge costs when they are destroyed or must be torn down.

{/Sidebar}

Subdivision of land into lots for single-family units, or infill development of vacant lots is permitted under the preexisting zoning. It is recognized that these buildings will ultimately have to be torn down as sea level rises or will be destroyed by storm. Maximum building size is limited to reduce size and value of developments, lowering the loss of property and costs of relocation and emergency assistance in event of storms.

- A. **Maximum Building Area.** Table 5.411 indicates the maximum lot size in each district and the maximum building size by right and with the acquisition of additional land.
- B. **Combined Lots.** A property owner may acquire up to two additional contiguous lots in the zoning district that are below the oceanic shoreline elevation and combine their development potential on one lot. The maximum floor area then permitted is shown in Table 5.411.
- C. **Transferable Development Rights (TDR).** A landowner may acquire noncontiguous lots to increase land area and maximum house size.

Table 5.411 Maximum Floor Area		
Lot Size	Maximum Floor Area (sf)	Maximum with Combined Lots or TDR (sf)
5,000 sf	650	1,950
6,000 sf	750	2,250
8,000 sf	950	2,850
10,000 sf	1,150	3,450
12,500 sf	1,275	3,825
15,000 sf	1,400	4,200
20,000 sf	1,650	4,950
1 ac	2,828	6,000
2 ac	3,699	8,000
3 ac	4,570	9,000
5 ac	6,313	10,000

- D. Floor Area Calculation. Up to two adjoining lots or two TDRs may be purchased to increase house size. Where the lots are of different sizes, add the maximum floor areas (Table 5.411, column 2) of each lot size.
- E. Noncontiguous Lots. Lots purchased for their TDRs shall be at elevations below the oceanic shoreline elevation. Lots that are partially outside the oceanic shoreline may be purchased where 40 percent or more is below the oceanic shoreline elevation. A conservation easement shall be placed on such lots as permanent open space.
- F. Lots with Altered Shoreline. Lots where storm events have altered the mean high-water line may be used to gain an increase in building size or for TDRs. However, only the area above the mean high-water mark shall be counted. To be eligible as a TDR, the lot shall have at least 75 percent of its minimum area above mean high-tide line. If beach is accreting, the platted lot line shall be preserved, and accreted land becomes jurisdiction land.
- G. Insurance. All development or subdivisions shall have a special taxing district created or join an existing one as specified in Section 5.102.

Section 5.412 Oceanic Shoreline Cliffs

There are areas in oceanic shorelines with cliffs, bluffs, or steep slopes, so that land adjacent to the oceanic shoreline is at risk due to erosion. These shorelines may be found in any of the stability categories and they are subject to risk of cliff collapse due to sea-level rise or natural erosion. In unstable and weakly stable areas, cliff collapse is likely, and can result in the loss of structures. Setbacks from the mean high-water mark are the primary protection strategy.

- A. Geologic Study. A geologic study shall be conducted, unless one is available from the jurisdiction, that classifies the area as stable, weakly stable, or unstable, and determines the historic rate of erosion. The geologist shall evaluate the materials of the cliffs, faults, undermined areas, layered geology, storm

surge history, and historic recession rates. The study shall provide a cliff-top line based on the estimated subsidence of the cliff in the area over the next 100 years.

- B. Setbacks. The setback line in oceanic shoreline cliff areas is as follows:
 - 1. Unstable Areas. The setback shall be 200 feet inland of the cliff-top line.
 - 2. Weakly Stable Areas. The setback shall be 125 feet inland of the cliff-top line.
 - 3. Stable Areas. The setback line shall be 50 feet inland of the cliff-top line.
- C. Landscape Cover. The developer shall be required to undertake the following stabilizing actions depending on the stability of the shoreline.
 - 1. Unstable Areas. Any areas above mean high tide determined suitable for plants shall be planted in grasses or forbs to stabilize the foot of the cliff. Where feasible, vines, shrubs, or trees should be planted to reinforce the cliff face.
 - 2. Weakly Stable Areas. The plantings in 1 above shall be applied.
 - 3. Stable Areas. Trees, shrubs, and ground cover shall be left undisturbed at the base and on the cliff face.
- D. Cliff-Top. The area of the setback at the top of the cliff shall be maintained in existing natural cover, and eight plant units per acre shall be planted to enhance runoff control where existing cover is made up of grasslands or old fields. Up to 20 percent of the land in the setback may be used as lawn that primarily adjoins the dwelling and allows for a view corridor 40 percent of the width of the waterfront side of the lot.
- E. Storm Water Runoff. In unstable and weakly stable shorelines, every effort shall be made to move storm water runoff away from the cliff face to perennial streams or storm systems with safe discharges to the ocean. Where that is not feasible and runoff is concentrated in swale areas, riprap or other structures shall be developed by a registered engineer to prevent erosion as water makes its way down the cliff face.
- F. Insurance. All development or subdivisions in the oceanic shorelines with cliffs shall have a special taxing district created or join an existing one as specified in Section 5.102.

DIVISION 5.500 CONSTRUCTION REGULATIONS FOR UPLANDS

This division provides standards for construction in resource areas that are uplands. These additional regulations are intended to address development in unprotected portions of the resource.

Section 5.501 Riparian Buffers

Riparian buffers are upland areas adjoining waterbodies, floodplains, or wetlands where vegetation filters surface and subsurface water flows, removing pollutants before they reach surface waters. The following controls the design of new subdivisions and land developments in the unprotected portion of the riparian buffers.

- A. Detention. Where practical, detention should be placed near the protected water because this is often the low point of the watershed.

- B. Residential Lots. These should be as far as possible from the water or on the higher portions of the riparian buffer. The plans shall provide open space gaps between lots for pedestrian access from interior lots to the open space.
- C. Wooded Areas. Woodlands in the riparian buffer should be given priority for preservation over grasslands, farmland, or old fields.

Section 5.502 Steep Slopes, Greater than 25 Percent

Construction in these areas is generally to be avoided as it induces erosion and lot have little usable space. Any construction on the buildable area of such land shall meet the following standards.

- A. Residential Construction. Excavation for buildings shall be held to a minimum. Using stilts to support the building shall be required if excavation exceeds 800 square feet.
- B. Roads. Roads shall avoid these areas if alternative routes are available. The planning director and engineer shall require road design alterations as specified in Sections 5.212 and 5.213.
- C. Cut and Fill. These slopes require extreme cut and fill for roads or buildings. Where possible, the building shall be anchored to bedrock. The engineer may require special techniques, including piles, retaining walls, metal mesh, drainage or other methods to stabilize the exposed cut face. A plan for the placement of all fill on-site or for removal to another location shall be approved
- D. Landscaping. All disturbed areas shall be vegetated to stabilize the soils. Grasses and forbs shall be planted under a protective cover that stabilizes the area until plants can root.

Section 5.503 Steep Slopes, 15–25 Percent

In these areas, buildings can usually be sited with walk-out basements or lower levels. The site planner should, however, seek to site buildings on flatter land to provide more usable yards. The following standards shall be met.

- A. Construction. Buildings may be placed on slopes through excavation for a walk-out basement. Portions of wider buildings and decks may require the use of stilts or cantilever construction.
- B. Roads. These shall be engineered to minimize cut and fill and to avoid displacing material down-slope, this destabilizing that land and damaging trees or other vegetation. The planning director and engineer shall require road design alterations as specified in Sections 5.212 and 5.213.
- C. Cut and Fill. These shall be designed to be stable and to prevent materials washing or falling into the roadway. Stabilizations shall be accomplished using vegetation or mechanical means.
- D. Landscaping. All disturbed areas shall be vegetated to stabilize the soils. Grasses and forbs shall be planted under a protective cover that stabilizes the area until plants can root.

Section 5.504 Edge Woodlands

Where development is to be done in the woodlands of a property, a tree survey is required. Where feasible, the development shall be sited to avoid large, healthy trees and should be concentrated in areas with small clearings, low-quality trees, or invasive plant species.

Section 5.505 Core Woodlands

Where development is to be done in woodland, it should avoid core woodlands. Where there are both edge and core woodlands on-site, the planning director shall require plan modifications and shall permit reduced protection of edge woodlands on an acre-to-acre basis to avoid development in core woodlands. Where there is no way to avoid building in core woodlands, the development shall meet the following standards.

- A. Location. The development shall be sited so that it is as close to an existing road or roads and as near edge woodlands as possible.
- B. Tree Survey. A tree survey shall be required. Development shall cut a minimum area, located in areas with small clearings, unhealthy trees, short-lived trees, or invasive plant species.

Section 5.506 Woodlands, Fire Hazard

Woodland areas having a fire hazard designation shall have the same open space protection as edge woodlands, which may result in lower densities. The following additional requirements govern the design of clustered development.

- A. Cleared Area. The area around the lots in cluster developments shall be cleared of underbrush for a distance of 50 feet from lot lines. A few trees the urban forester indicates are in excellent health and of the least flammable types may be preserved to enhance the woodland character.
- B. Forest Maintenance. The forest area shall be maintained to reduce fire hazard by eliminating understory vegetation and dead materials that are potential fuel sources for a minimum of 660 feet beyond the cleared area.
- C. House Construction. The following rules apply to construction.
 - 1. Roofs shall be metal or tile.
 - 2. Gutters are prohibited. Roof overhangs needed to prevent water running down walls or backsplash onto walls shall be designed of materials that are not combustible.
 - 3. The preferred wall construction shall be masonry, brick, stone, or concrete. Wood siding is prohibited.
- D. Roof Fire Protection. Roofs are required to have a spray system that, when activated during fires, sprays the roof for a minimum of ten minutes after activation. The system shall be designed based on roof area. Where no public water is available, the system should be filled at the start of each fire season and may be drained during freezing weather. Flat roofs shall be flooded with a minimum of one inch of water and may include green roof construction.
- E. Landscaping. Landscaping on the lots shall be approved based on planting the most fire-resistant species and an irrigation plan that maintains the plants in a strong condition during dry weather. Trees and shrubs are discouraged within 50 feet of buildings. Individual landscape plans must be approved by the planning director if there are to be trees and shrubs on-lot.
- F. Special Taxing District. Developments in fire hazard areas shall create a special taxing district (Section 5.102) that provides for required maintenance and insurance.

Section 5.507 Woodlands, Invasive

A survey of the trees shall identify healthy trees, dead or sick trees, and invasive trees on the site. A management plan shall be provided for the elimination of the invasive species. The survey shall indicate all areas where more than 70 percent of trees are invasive. The planning director shall permit all protected areas to be cut, when .75 acres of developable edge woodlands or core woodlands are preserved. Areas of 70 percent invasive species shall be cleared and replanted with eight plant units per acre.

Section 5.508 Unstable Soils

Unstable soils should be completely avoided for construction of buildings, as the soils and rock are subject to movement that can damage buildings and infrastructure and threaten life. In the event that development must be permitted, the following standards shall be met.

- A. Avoidance. If building on these soils can be avoided by locating development on stable soils, this shall be done, and no development permitted on unstable soils.
- B. Minimization. If total avoidance is not possible, the developer shall use more intensive units in clusters to minimize the extent of unstable areas developed.
- C. Geologic Study. If any development is proposed for unstable soils, a geologic study by a registered engineer shall be submitted that identifies types of instability and natural and other mechanisms that promote slippage. The study shall indicate areas, either up- or down-slope, that are at risk when there is soil movement. The study should identify methods of anchoring buildings or reducing the potential for movement, including the following.
 - 1. Anchoring to stable bedrock and foundations designed to prevent slippage damaging the structures. Where not feasible, the following methods may be used.
 - 2. Structural techniques such as reinforced foundations to reduce damage when movement occurs.
 - 3. Soil stabilization techniques, such as reducing storm water to reduce infiltration that leads to soil movement.
 - 4. Dewatering the slopes to increase their stability.
- D. Roads. Roads should be permitted to cross unstable soils only where there is no other means of access.
- E. Avalanche or Rock Slide Areas. These are areas of unstable soils where there is a history of movement and damage and more movement is certain to occur in the future. No buildings are permitted in these areas because such movements threaten life and property and there are no engineering solutions. Roads shall be permitted only where the road is covered with a structure that allows avalanche or rock slides to go over the road.
- F. Special Taxing District. All developments with unstable soils shall have a special taxing district created or join an existing one (Section 5.102) to fund the repair of roads and utilities in the event of slippage. The jurisdiction may refuse to accept the road if it believes maintenance costs and hazards are too high, requiring a private road. The tax district shall also build up funds for emergency repair.

Section 5.509 Sand Dunes

Buildings shall not be constructed on dunes. Many sand dunes are in areas of lake or ocean front. In these areas, crossings of dunes to reach the shore shall be on boardwalks and stairs. The building of boardwalks

shall be done by hand. Areas disturbed by this construction shall be revegetated with native species adapted to dune environments. In desert environments, the dune areas shall not be developed.

Section 5.510 Limestone Stabilization

Limestone is typically found underlying the ground's surface and is prone to two problems. The first is collapse, which creates sinkholes, and the second is pollution of the aquifer. In limestone areas, all development shall be done in accordance with this section in order to avoid the risk of sinkhole development, surface collapse, or groundwater contamination.

- A. Surface Drainage. A detailed existing surface drainage system analysis shall be submitted. This should identify all depressional areas, including any existing sinkholes and stream channels, and whether they are ephemeral, perennial, or disappearing.
- B. Infrared Photos. Infrared aerial photos shall be taken where there is a history of sinkholes in order to determine if there are subsurface voids near the surface. Under the right temperature conditions, these show up as warm in winter conditions or cool in summer conditions.
- C. Storm Water. The storm water system shall be designed to reduce storm water flows, and to route flows in a manner that discourages the development of sinkholes. The following elements shall be considered.
 - 1. Green roofs to reduce total runoff.
 - 2. Pervious pavement to reduce and avoid concentration of runoff.
 - 3. Storm sewers or impervious stream channels to move storm water flows to established stream channels or out of limestone areas.
 - 4. Detention basins lined with clay or other impervious materials to prevent concentrated infiltration that leads to sinkhole formation.
- D. Special Taxing Districts. All developments or subdivisions in limestone stabilization areas where there is a history of sinkholes in developed areas shall have a special taxing district created or join an existing one as specified in Section 5.102.

Section 5.511 Limestone Water Quality

{Sidebar}

The standards of this section are tailored to the Floridian limestone aquifer or other areas where aquifer water is used by the community and recharge occurs in the area. Florida's Department of Natural Resources provided the maps discussed in this section. Other states may be able to provide such maps. Using the medium vulnerability standards is recommended where no maps can be developed.

{/Sidebar}

Limestone maps supplied by the state's geologic survey indicate high, moderate, and slight vulnerability to groundwater pollution.

- A. High Vulnerability. The following rules are intended to reduce the disturbance of existing surface vegetation and the ground water system to avoid increasing the potential for damage.

1. The planning director may require the developer to use the most highly clustered option in order to maximize natural cover.
 2. Uses served by on-site septic systems shall be limited to one dwelling unit or its equivalent per eight acres.
 3. No rezoning that reduces the amount of required open space and increases impervious surfaces shall be permitted.
- B. Medium Vulnerability. The provisions of A1 and A3 above shall apply. Uses served by on-site septic systems shall be limited to one dwelling unit or its equivalent per six acres.
- C. Low Vulnerability. Developers shall be encouraged to use maximum clustering. Any development served by on-site septic systems shall be limited to one dwelling unit or its equivalent per five acres. Upzoning is encouraged in this area rather than in areas of high or moderate vulnerability.

Section 5.512 Sinkhole Protection Area

The sinkhole protection area is intended to reduce the flow of pollutants into the sinkhole or erosion of the sinkhole's walls.

- A. Land Use. The only development permitted shall be recreational trails and viewing platforms for a sinkhole. The trails shall be made of crushed limestone or woodchips rather than impervious materials. If the trail slopes toward a sinkhole, it shall be designed to spread water and not concentrate it, thereby avoiding erosion or the washing of materials into the sinkhole. Viewing decks shall be of wood-frame or metal construction.
- B. Drainage. An engineering study shall be conducted to determine the best way to handle storm water so as not to increase the potential for collapse or degradation of water quality. It shall consider the following measures.
1. Diverting storm water away from a sinkhole.
 2. Using impervious channels and storm water facilities to avoid washing material into a sinkhole.
 3. Designing storm water facilities that clean water.
 4. Using green roofs and pervious pavement to reduce runoff that will flow into a sinkhole from outside the sinkhole protection area.

Section 5.513 Springs

Springs designated as suitable for recreation and springs that provide water to public or private water treatment plants require special protection. Minor springs have no special regulations or protection.

- A. Recreational Springs. The only uses permitted in the spring protection area are those recreational uses and supporting facilities that are water-dependent and provide amenities for water recreation. A publicly owned facility shall have its plan approved by the planning commission and park board. Privately owned facilities shall gain approval from the planning commission, jurisdiction health department, and, if navigable waters are involved, from the Corps of Engineers.
- B. Water Supply Springs. These shall be protected with only pedestrian trail access permitted as approved under the site plan.
- C. Storm Water. Storm water shall be diverted around the spring protection area for both recreational and water supply springs. The water shall be diverted to the outflow stream via impervious channels to

discharge points at least 1,320 feet below the recreational spring or below the intake for the public water supply, whichever is greater.

- D. Water Quality. All springs meeting fishable and swimmable standards shall be maintained as such by the proposed use. Springs not meeting fishable and swimmable standards do not qualify for spring protection.

Section 5.514 Faults and Earthquakes

Faults run well below the surface and are often not obvious on the surface. Area near a fault is subject to movement and changes in elevation, creating damage when there is slippage in a fault, and an earthquake. The following regulations apply.

- A. Buildings. All buildings shall meet the earthquake construction standards adopted by the jurisdiction.
- B. Water. Water supply lines shall provide shutoff valves and be looped as required by the engineer in order to maintain waterflow and prevent loss of water pressure after events.
- C. Studies. The developer shall obtain a study indicating the type of soil movements anticipated in the area during a quake.
- D. Earthquake Liquefaction. Where the study in C above indicates that the soil will undergo liquefaction, that soil shall be classified as follows.
 - 1. Generally level areas with small-scale disturbances anticipated, regulated by E below. OR
 - 2. Sloped areas where liquefaction will destabilize the slopes, causing recontouring with slumping of the existing surface and the covering of lower land with the flow of soil and is regulated by F below.
- E. Level Areas. These areas require foundations designed to prevent building collapse. The engineer may require more extensive water, electric, and gas infrastructure with cut-off valves and more looping to maintain service or prevent fire.
- F. Sloped Areas. Where the slope will become unstable in an earthquake, the area described in D2 above is best left in open space. A developer wishing to build in such areas must comply with the following requirements.
 - 1. The plan shall require grading to eliminate the potential of catastrophic slides.
 - 2. Any lot or parcel sold for development shall include the warning that the parcel is in a liquefaction area and that any building constructed upon it is likely to collapse or be moved.
 - 3. The developer shall create a special taxing district (Section 5.102) that provides insurance for the development and its infrastructure in order to cover the owner's and jurisdiction's losses in the event of a collapse from an earthquake.

Section 5.515 Endangered Species

{Sidebar}

Sections 5.516 and 5.517 illustrate approaches to protecting endangered species with specific protection standards. While standards may be difficult to develop and will vary depending on local conditions, it is a far better approach than requiring an environmental impact study. Eagles and predators are given as examples. For eagles, the standards focus on protection of nesting areas. For predators, the standards focus on reduction of conflict potential. Zoning offers the first line of protection for many endangered species. Natural (N) is the most protective, as extreme clustering allows a developer to minimize impact through site planning. A Wilderness (W) district with higher open

space requirements could be adopted. Rural areas are most likely to have endangered species and the least development. With Suburban (S) or Estate (E) districts, more standards are required, and clustering may not be as effective. Protection in urban character or use districts is nearly impossible. Areas likely to have endangered species should not be zoned for urban or sub-urban development.

{/Sidebar}

Section 5.516 Eagle Nests

Eagles are a protected species whose nests are used over many years. Eagles require protection from development during the nesting season; a three-ring protection system is used. The following rules apply to the three rings of protection around an eagle's nest (Figure 5.516).

- A. Inner Ring. The inner ring extends 330 feet from the nest tree. The only construction allowed in this area is of a trail that is part of the jurisdiction's recreation plan or is included as a connector to the jurisdiction's trail system.
- B. Middle Ring. This zone extends from 330 to 660 feet from the nest tree. Development is permitted, provided it meets the following standards.
 - 1. Residential uses shall be clustered as far from the eagle's nest as is feasible on the property, or, on large properties, entirely outside this zone.
 - 2. Nonresidential uses may have a maximum of one-half acre cleared for building and parking. A bufferyard of 1.0 opacity consisting only of plants shall be constructed between the use and the nest.
 - 3. A tree survey is required, and the jurisdiction's urban forester shall approve the cutting of trees or require the moving of buildings to provide maximum protection.

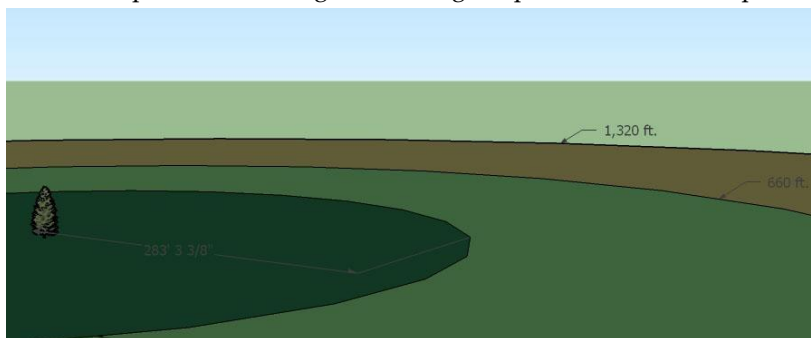


Figure 5.516 Eagle nest protection zones

- C. Outer Ring. This zone extends from 660 to 1320 feet from the nest tree. Construction may occur in this zone. No change to more intense zoning shall be made without approval of an environmental impact review. Such review shall determine that the proposed use intensity will neither interfere with eagle movement from the nest area to feeding grounds nor increase the ambient noise level above that found under the existing zoning. The jurisdiction may mandate that all development in the zone meet special criteria designed to protect eagles and may designate all or part of the area as an eagle overlay zone with specific development restrictions.

- D. Construction Period. Construction can occur in the protection areas only outside the nesting season {Insert} *(insert dates in local area from local urban forester)* {/Insert}. No construction shall occur before 8:00 a.m. or after 6:30 p.m.

Section 5.517 Predators

Predators are often endangered and there are substantial conflicts between predators and development. Where there are predators in areas, development should be designed to reduce conflicts. The following design elements shall be applied.

- A. Location. The development shall be located as far as possible from state or federal wilderness areas and as near as possible to existing roads on the edge of habitat areas.
- B. Design. The best design solution is a megastructure, with highly clustered development as the alternative. Single-family subdivisions are prohibited in such areas as they provide maximum potential for conflict. The planning director shall require the developer to use maximum open space but not lower density.
- C. Pets. The development should prohibit pets that will be allowed outside as they are likely food to a predator. This should be done in the covenants. If pets are allowed, titles to property should warn homeowners of the danger to their pets.
- D. Garbage. All garbage shall be placed in dumpsters that can be secured against predator access or within buildings in areas inaccessible to animals. Outdoor areas containing dumpsters shall be equipped with motion-sensitive lights to ensure that, when people approach, the area shall be lighted.
- E. Landscape. The planting and clearing near the development shall meet the standards of Section 5.506. If the area is not in a fire hazard area, fire requirements do not apply, but landscaping should be thinned to eliminate cover within 100 feet of the project.

DIVISION 5.600 CARBON REGULATIONS

{Sidebar}

This division provides standards to create a carbon-neutral community. The regulations in this division seek to encourage solar or wind power, or buildings that conserve energy. It does not require Leadership in Energy and Environmental Design (LEED) certification because it requires verification after construction and zoning is approved before construction. LEED is encouraged to be incorporated in building codes. The standards in this division may be required or considered as best management practices. The performance of these options varies across the country; this should be taken into account by the jurisdiction.

{/Sidebar}

Section 5.601 —Flat Roofs

Buildings with flat roofs represent a resource for reducing carbon footprints in several ways. These regulations apply to roofs from flat to a pitch of no more than 2 in 12. One of the following options shall be used.

- A. Solar Power in High Suitability States. Buildings with roofs over 20,000 square feet shall be required to provide solar panels over the entire roof. Buildings not meeting area or slope requirements shall be encouraged to provide solar panels.
- B. Solar Power in Lower Suitability States. Buildings with roofs over 40,000 square feet shall install solar panels over the entire roof. Other buildings may provide solar panels or solar lighting, as specified in C below.
- C. Solar Lighting. The placement of skylights shall reduce or eliminate the need for daytime lighting on the interior. The design shall reduce demand for electricity and shall not result in lost heat that would negate the savings. This option can be paired with green roofs or rooftop storage (D or E below).
- D. Green Roofs. These roofs provide insulation advantages and lower the heat island effect. They shall meet the standards of Section 14.502.
- E. Rooftop Storage. This option reduces runoff and can be paired with solar lighting and green roofs (C and D above). It shall meet the standards of 14.503.
- F. Insulation. Added roof insulation is encouraged with any of the above options (A–E).

Section 5.602 —Car Shelters

Car shelters are found in multifamily developments, attached housing, automobile dealerships, or commercial or office parking areas. Where they are used, they shall be designed to accommodate solar panels. The planning director may review the design to ensure orientation shall maximize solar collection. Developers shall install such panels, unless an exemption is granted where it can be demonstrated that the system cannot break even within a 20-year life span.

Section 5.603 —Solar Plants

Solar plants may be permitted on parcels of land greater than 10 acres. These may be supplemental generation facilities or major generators. This is an ideal use of excess rights-of-way along highways or unused parcels of land. The following standards apply.

- A. Fencing. These facilities shall be surrounded by eight-foot chain-link fence to discourage unauthorized access.
- B. Where abutting a residential development that does not have a bufferyard, the fencing shall be screened with shrubs or a hedge that shall be maintained at a height of eight feet.
- C. If part of a development, this land does not count as open space.

Section 5.604 Project Wind Turbines

Wind turbines are permitted in industrial or business parks, subject to the following requirements.

- A. Ambient Noise. A study shall be made of ambient noise levels for the site, including measurements at 660 feet from the site.
- B. Turbine Noise. Noise analysis of the proposed wind turbines shall show decibels at 660 feet.
- C. Maximum Noise Level. The maximum noise level in adjoining nonresidential areas shall have a Day-Night Level (DNL) of 60. In heavy industrial zones, the maximum level shall be 70 DNL. In adjoining residential areas, the maximum shall be 50 DNL or the nighttime ambient noise level, whichever is greater.

Section 5.605 —Wind Farms

Wind farms shall be permitted as follows.

- A. Districts. Article 2 has specific district standards.
- B. Area. The wind farm must have a minimum of 40 acres. The number of wind turbines is dependent on meeting the manufacturer's spacing requirements.
- C. Separation. The wind farm shall be located at least 1,320 feet from any existing dwelling unit or subdivision.
- D. Viewsheds. Where the jurisdiction has established viewsheds for major scenic topographic features from specific highway locations, the wind farm is not permitted to intrude into a viewshed.

Section 5.606 Individual Wind Turbines

In the AU, I, and HI districts along arterial highways, permitted uses may install vertical-axis wind turbines. Turbines shall not exceed the height limit for the district by more than 100 feet. Such turbines shall be located at least 660 feet from residential units. Farmsteads in the AG or CS districts may install wind turbines located at least 660 feet from property lines.

Section 5.607 Landfills

Before any landfill may be permitted, an evaluation of methane production shall be developed. A capture system shall be provided for this gas; no flaring or burning of the gas shall be permitted.

Section 5.608 Animal Containment

All animal containment uses with more than 500 animal units shall install collectors to capture methane and use it on-site or sell to utilities.

Section 5.609 Oil and Gas Wells

All oil and gas wells shall be designed to capture methane on-site or use it to generate power. Flaring or release is prohibited.

DIVISION 5.700 POLLUTION REDUCTION AT SOURCE

Section 5.701 Purpose

Many land uses are sources of pollution. This article addresses those that are not regulated by the federal and state governments. Standards are set to limit pollutant nuisances for the residents and to protect the health, safety, and welfare of residents. For sources under federal, state, or other regulation, some additional requirements here are intended to provide the jurisdiction's first responders and planners adequate information to deal with failures that endanger public health or safety, or to mitigate consequences of potential failure through site planning.

Section 5.702 Light and Glare

The artificial lighting of buildings, parking areas, streets, and signs can be a major nuisance to neighboring property owners or a safety issue on streets. The following standards apply.

- A. Residential Property Line. No on-site lighting may result in more than 2.15 lux of illumination at ground level on any adjoining residential property. If bufferyards separate the properties, there shall be no more than 21.5 lux of illumination in the interior of the bufferyard.
- B. Nonresidential Property Line. No on-site lighting may result in more than 32.3 lux at ground level on the adjoining property.
- C. Shielding. No light source shall be visible at the property line above an elevation of four feet. Section 5.703 addresses cut-off fixtures and Section 5.704 provides an exception for decorative lighting fixtures.

Section 5.703 Shielding

All luminaries shall have their light source shielded by cut-off fixtures to direct the light downward with no view of the light source above the cut-off line (Figure 5.703). Decorative lighting can be exempted from this per Section 5.704.

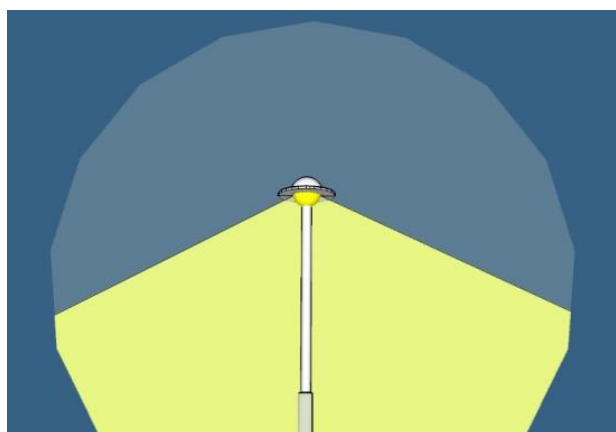


Figure 5.703 Cut-off lighting

Section 5.704 Decorative Lighting

Decorative lighting shall be enclosed in a shell of glass, plastic, or similar material that completely diffuses the light source, so the shell is the apparent source of the light. These may be globes or other shapes. The maximum height to the top of the shell is eight feet. The maximum illumination from such fixtures shall be 54 lux.

Section 5.705 Exterior Lighting Plan

All land developments, subdivisions, and nonresidential uses on existing lots shall submit a lighting plan (Figure 5.705) certified by a licensed engineer. It shall show maximum illumination levels at ten-foot intervals across the property, at the property line, and, where appropriate, in the interior of any bufferyard.

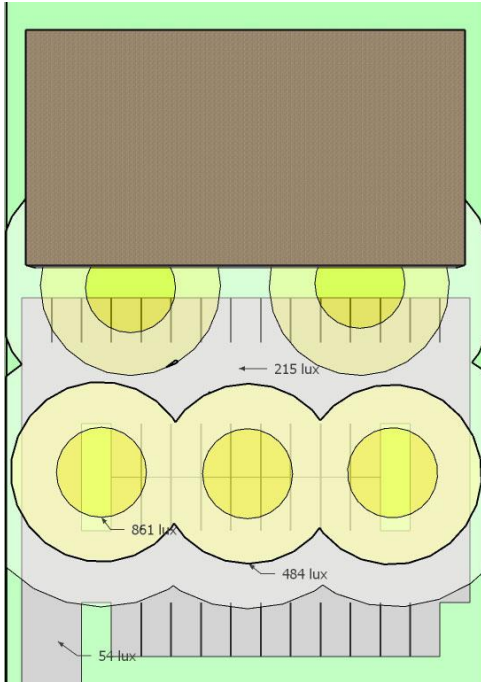


Figure 5.705 Lighting plan showing illumination levels

Section 5.706 Maximum Illumination

The maximum illumination is the highest lux measurement on a site. Tables 5.706A–C provide the maximum illumination permitted for districts and uses or functions.

Table 5.706A Nonresidential - UC, UM, U, AU, S Districts	
Use or Function	Lux
Parking Lot, open	861
Parking Lot, closed	431
Car Sales Inspection Area, open	2,153
Car Sales Lot, open	1,076
Car Sales Lot, closed	323
Pedestrian Precinct, open	861
Pedestrian Precinct, closed	431
Gas Pump Area, under canopy	1,076
Gas Pump Area, uncovered	538
Building Entrance Area	1,076
Truck Loading Areas, open	646
Truck Loading Areas, closed	215
Streets - See Section 5.708	269

- A. Open or Closed. In Tables 5.706A and B, “open” applies to the time period from 45 minutes before opening to 45 minutes after closing. “Closed” applies to all other times when lighting is used.

- B. Motion Detection. This is lighting that is turned on by motion detectors and goes off within five minutes.
- C. Entrances. These are areas within 25 feet of non-emergency entrances to nonresidential buildings and 15 feet of entrances to residential buildings.
- D. Car Sales Inspection Area. This is an area, adjacent to the sales showroom and constituting less than 5 percent of the outdoor parking areas, where more intense illumination is permitted. This lighting shall be illuminated only when the use is open.

Table 5.706B Nonresidential - E, CS, AG, N Districts	
Use or Function	Lux
Parking Lot, open	646
Parking Lot, closed	108
Car Sales Lot, open	861
Car Sales Lot, closed	215
Pedestrian Precinct	861
Gas Pump Area, under canopy	861
Gas Pump Area, uncovered	431
Building Entrance Area	646
Truck Loading Areas, open	646
Truck Loading Areas, closed	108
General Security Lighting	108
Security Lighting, motion-initiated	315
Streets - See Section 5.708	

Table 5.705C Residential - Urban Districts	
Use or Function	Lux
UC, UM, U, AU Districts	
Entrance Areas	1,076
Pedestrian Precincts	861
Individual Lot, entrance	538
Individual Lot, motion-initiated	538
Individual Lot, holiday	1,076
S District	
Entrance Areas	538
Pedestrian Precincts	431
Individual Lot, entrance	431
Individual Lot, motion-initiated	538
Individual Lot, holiday	1,076
E District	
Entrance Areas	431
Pedestrian Precincts	107

Individual Lot, entrance	431
Individual Lot, motion-initiated	646
Individual Lot, holiday	1,076
CS, AG, N Districts	
Individual Lot, entrance	431
Individual Lot, motion-initiated	323
Individual Lot, holiday	861

Section 5.707 Sports Facility Lighting

At night, sports facilities require much brighter illumination levels for safe play. The level of illumination varies with the type of sport and the level of play. The lighting should be shielded to prevent spillover beyond the playing surfaces. The maximum height of luminaires is set below.

- A. Professional and College. The illumination shall not exceed 3,229 lux and the height of 50 feet more than maximum stadium height.
- B. High School Sports. The illumination shall not exceed 1,615 lux. The maximum height of lighting shall not exceed 120 feet.
- C. Other Sports. The illumination shall not exceed 1,076 lux, with a maximum height of 80 feet. Field lights must be extinguished before 10:30 p.m. Parking and other lights shall meet requirements in Section 5.706.
- D. Taller Lighting. The planning director may permit taller lights where it is demonstrated that lower heights cannot adequately provide even coverage of the fields. Cut-off fixtures shall be used to limit visibility from residential buildings.
- E. Spillover Lighting. Where the lighting plan indicates sports lighting spillover into residential areas, cut-off lighting and/or a bufferyard may be required by the planning director. An opacity of up to 1.0 may be required to cut down spillage where feasible.

Section 5.708 Street Lighting

In Estate (E), Countryside (CS), Agricultural (AG), or Natural (N) districts, streets should not be illuminated to preserve night skies and a rural character. Lighting is required for safety at some intersections or areas. Where street lighting is required in these areas, it shall consist of red LED lights that minimize negative effects on night vision and lessen the degree to which lighting interferes with the visibility of the sky and stars. The following shall govern the provision of street illumination.

- A. Interchanges. On limited-access highway interchanges, illumination is permitted where the highway turns onto the local road system. Maximum height shall be 50 feet, unless state requirements are lower.
- B. Dangerous Areas. Where the engineer determines that conditions on a street or intersection are dangerous due to alignment, speed zones, or other factors, street illumination with a maximum height of 35 feet shall be permitted.

Section 5.709 Sign Illumination

All sign illumination shall meet the following requirements.

- A. Exterior Illumination. Signs may be lit from exterior sources, mounted on the ground, a building or other structure, or the sign itself. Installations shall be shielded so as to light only the sign., The light source shall not be visible from any road. Maximum illumination shall be no more than 646 lux.
- B. Interior Illumination. Signs with an interior light source shall have a maximum illumination of 431 lux.

Section 5.710 Noise

All nonresidential uses except those specified in Table 5.710 shall have a maximum noise level of 55 DNL, measured five feet from the building's exterior walls and any entrances or ventilation locations.

Table 5.710 Maximum Noise – DNL*	
Adjoining Use or District	Maximum DNL
Residential	55
Commercial	65
Business Park or Industrial	75
Heavy Industry	80
*The maximum noise level applies even if there is an intervening district.	

- A. Mining. Mining, concrete and asphalt batch plants, and other uses that require heavy equipment to be run outside of buildings, shall not exceed 55 DNL at any residential property line. If that cannot be done, the owners shall install mitigation bufferyards to achieve the standard.
- B. Airports. In the development or expansion of any airport, developers shall be required to obtain all land lying within the 55 DNL noise contour or acquire the development rights and retain this land as permanent open space.
- C. Mitigation. Any mitigation buffers or structures shall be certified as mitigating noise to the standards of this section by an acoustical engineer, using the Federal Highway Administration's *Highway Traffic Noise Prediction Model* (FHWA-RD-77-108, as amended).
- D. Multiple Land Uses. Where more than one land use or district abuts the site, the noise standard shall be met on zoning boundaries or property lines, so all uses are fully protected from spillover through other districts.

Section 5.711 Vibrations

Vibrations are movements of the earth in response to the actions of humans or machines. Severe vibrations may damage nearby public or private property. The maximum vibration standard is measured by peak particle velocity. This measurement is calculated as the sum of the displacement vectors of three mutually perpendicular components, recorded simultaneously and multiplied by the frequency in cycles per second. Where these standards are not met five feet beyond the building walls of the generator, the application shall be denied. If equipment is located outside, then barriers, structures, and/or dampening measures shall be employed to ensure that all uses meet these standards at the property line or interior of the bufferyard if one is required on the lot.

A. Standards. The standards for vibration are found in Table 5.711, except as provided in B below.

Table 5.711 Maximum Vibration Levels				
Frequency in Cycles per Second	N, AG, CS, E, S, AU Residential	AU, U, UM, UC, BP	I, HI, P	Impact Vibrations*
Less than 1	0.0008	0.0040	0.0078	0.0196
1-9	0.0004	0.0020	0.0039	0.0098
10-19	0.0002	0.0011	0.0022	0.0055
20-29	0.0001	0.0006	0.0011	0.0028
30-39	0.0001	0.0004	0.0007	0.0018
40-49	0.0001	0.0003	0.0005	0.0013
50 or more	0.0001	0.0002	0.0002	0.0010
*Impact vibrations are those occurring less than eight times in 24 hours, with a separation of at least one minute between them.				

B. Exemptions. The following are exempt from the standards of Table 5.711.

1. Construction on buildings, roads, or landscaping is exempt from vibration regulations from 7 a.m. to 7 p.m.
2. Traffic on roads, streets, or railroads, public or private is exempt.
3. Mining may be granted specific exemptions for blasting by the planning director and engineer after they have reviewed the site geology, plans for blasting, and adjoining uses and have determined that the vibration standard cannot be met. In granting an exemption, they shall do the following.
 - a. Determine that no uses to be impacted by greater vibration are residential or a business where merchandise can be displaced or damaged.
 - b. Set limited hours when blasting may occur and allow the frequency of such activity to be no more than once per week.
 - c. If damage is likely, require that a surety be provided by the mining company to insure neighboring uses against damage. When damage occurs, the amounts shall be verified by the zoning officer. Where there is structural damage to a use or where damage in excess of \$500 occurs five times, the mine operator shall relocate the use. A special taxing district shall be required to pay for damages or relocation. e.

Section 5.712 Smoke and Particulates

All uses shall meet state and federal emission requirements for smoke and particulates. Developers shall submit an engineer's certification that the emissions of the facility will meet US EPA (Code of Federal Regulations, Title 40) and state standards. If state or federal regulations allow the purchase of pollution rights, no transfer that will result in worse air quality in the jurisdiction shall be permitted.

Section 5.713 Dust and Debris

Dust and debris are to be controlled on-site by a combination of bufferyard landscaping, fencing, paving, watering, and cleaning. Enforcement occurs primarily on a complaint basis. The presence of dust and debris off-site is visually determined. When dust or other debris is found on solid surfaces or vegetation on neighboring properties or roads, the zoning officer shall issue a citation. The zoning officer shall order on-site actions to reduce or eliminate debris by regular cleaning, watering, fencing, or other techniques. The zoning officer may also require the property owner to pay for the cleanup of dust or debris that has been deposited on adjoining property or roads.

Section 5.714 Odor

Enforcement occurs primarily on a complaint basis. There is no measuring equipment available to determine that an odor is a problem, so nuisance must be subjectively determined. There are two elements that are to be considered when judging odor. The first is the intensity of the odor, and the second is the quality of the odor. Table 5.714 indicates values for both criteria. Ratings of both intensity and quality are subjectively determined by a committee established under this section. Procedures to determine whether a use is creating a nuisance level of odor shall include the following.

- A. **Committee Composition.** The odor committee shall be composed of at least 15 members. Members shall be from a variety of areas and neighborhoods within the jurisdiction. At least seven shall be staff of the jurisdiction from the planning, engineering, public works, social services, and/or health departments. At least eight members are citizen members who have at least two years of college education. This committee shall be the pool for selection of an odor panel.
- B. **Process.** Upon receiving a complaint, the zoning officer shall select five members of the committee to evaluate the odor. No member shall be from the neighborhood or area filing the protest. The panel shall visit the site and evaluate the odor at property lines downwind of the emissions. Each member shall evaluate the site according to C below during the group visit.
- C. **Site Evaluation.** The members shall evaluate the odor by scoring its intensity and quality using the categories provided in Table 5.714. When a person cannot detect the odor, it is scored as neutral on the quality score.

Table 5.714 Odor Scoring System			
Intensity		Quality	
Description	Score	Description	Score
Not Detectable	0	Very Pleasant	2
Very Weak / Threshold	1	Pleasant	1
Weak	2	Weakly Pleasant	0.5
Distinct	3	Neutral	0
Strong	4	Weakly Unpleasant	2
Very Strong	5	Unpleasant	3
-	-	Very Unpleasant	4

- D. Determination. The zoning officer shall total the scores of each of the five members. If the total score is equal to or more than 25, then the odor is in violation of this section.
- E. Correction. The land use shall change processing, install scrubbers, filters, and equipment to capture materials that are responsible for the odor, and/or apply other techniques that reduce the odor.

Section 5.715 Toxic or Hazardous Material

These materials are regulated by the state and federal governments. The use regulations prohibit some uses that the jurisdiction considers too dangerous for its first responders to deal with in the case of an accidental release of these materials. The regulations of this section are intended to ensure the jurisdiction can impose performance standards that will protect the public in event of a spill.

- A. Prohibited Activities. Those activities prohibited by Section 2.207.
- B. Use. Toxic or hazardous materials may be used in industrial processes where the use has equipment to capture and neutralize the materials, so they can safely be disposed of or shipped to an appropriate storage or disposal facility.
- C. Risk Management Plan. Any use that is required by the federal government to submit a risk management plan (RMP) shall submit it to the jurisdiction so that the jurisdiction can comment. No such use shall proceed unless the federal government has approved the RMP. Accompanying the RMP shall be the following.
 - 1. Threat Level. An evaluation of how the emission levels during an accident compare to permitted emissions, in concentration and duration shall be submitted.
 - 2. Dispersion. A calculation of the area over which an accidental release will disperse or cover shall be submitted. It shall be determined whether this will impact any residential area or property used by the public such as schools, museums, or other places of public gathering, private schools, and streets. The likely dispersion patterns in normal and worst-case weather conditions shall be part of this submission.
 - 3. Mitigation. Identification of on- or off-site facilities that could be installed to reduce the risk to the public by containing, diluting, or neutralizing the spills shall be submitted. Upon review of the RMP, the engineer and planning director shall send comments to the review agency.
- D. Radioactive Materials. Where radioactive materials are used in medical testing and imaging, industrial measurement, or quality control equipment, they may be permitted as a limited use that shall meet the following provisions.
 - 1. Radioactive materials shall be stored in sealed containers or rooms.
 - 2. All areas where radioactive materials are used shall be clearly labeled.
 - 3. The fire, emergency service, and police departments shall be given detailed plans of the areas involved in the handling of any radioactive materials.
 - 4. The use shall have proper permits for the use, storage, and disposal of radioactive materials.
- E. Jurisdiction Review. The jurisdiction shall review the potential for spills in containment facilities and during transportation and routing of materials within the jurisdiction, as well as the ability of its emergency services to deal with spills or disasters.
- F. Approval. Such uses shall be approved as limited uses, except where the jurisdiction finds that the proposed use has the potential to create conditions that it does not have equipment or the potential to safely control. If this is found, the use can only be permitted as a conditional use. In reviewing the

conditional use, the potential for spills or disaster is assumed. Approval shall be based on the applicant taking actions such as redesign, providing equipment and training enhancing the jurisdiction's response capabilities, or improvement of the site plan to reduce the off-site risks to levels that can be handled.

DIVISION 5.800 ENVIRONMENTAL IMPACT STUDY

Where this ordinance calls for an environmental impact study, it shall follow the provisions of this division. The following conditions require an environmental impact study, in addition to any other conditions identified elsewhere in this ordinance as also requiring an environmental impact study.

- A. Essential Infrastructure. Essential infrastructure elements like roads or dams that cannot be built without intruding into protected areas of natural resources.
- B. Zoning Map Amendment. Zoning map changes that would decrease the protection level of natural resources.
- C. Specified Areas. Areas where the potential impact of a use is such that the text of the code calls for an environmental impact study.

Section 5.801 Information Required

All applications for permits requiring an environmental impact study shall provide the following information.

- A. Need. The need for the proposed development and its value to the jurisdiction as a whole shall be demonstrated.
- B. Location. An explanation of the rationale for the location of a development and the specific elements that make this location shall be submitted.
- C. Alternative Sites. Three sites shall be submitted as alternative locations to the one proposed. The developer shall submit the three alternatives, but the planning director may approve them or require the substitution of others that are felt to be better alternatives for minimizing damage and meeting the need.
- D. Damage to Protected Resources. A detailed analysis of the acres of protected resources likely to be damaged or destroyed and/or threats to surface or groundwater shall be submitted. The damage shall be quantified in terms of ecological harm to species, systems, and the physical environment. When possible, the damage should be expressed in dollars.
- E. Cost Benefit Analysis. The proposed development and all alternatives shall be compared in terms of the relative benefits, cost of development, and costs of damage associated with each.

Section 5.802 Hearing

There shall be a public hearing on the environmental impact study pursuant to Article 16 and approved, approved with condition, or denied by the council.

ARTICLE 6 INCENTIVES

DIVISION 6.100 PURPOSE

This article provides incentives to achieve specific goals for affordable housing, protection of natural resources, protection of rural environments, historic preservation, and sustainable development. Some of these elements have rules specified in this article that increase the permitted density in a district over that permitted by Article 3. In some cases, there are multiple approaches to allow a jurisdiction to select the one that best fits its needs.

DIVISION 6.200 AFFORDABLE HOUSING

Section 6.201 Approach

The first element in the approach to making housing more affordable to the jurisdiction's population and workforce is built into the district use and intensity standards of Articles 2 and 3. All dwelling unit types except mid- and high-rise are permitted in all districts, permitting residential subdivision and development with a wide range of unit types. Clustering is permitted as a matter of right, allowing developers to work with constrained sites. Article 3 provides a density incentive to encourage more urban and affordable dwelling unit types by the use of more intense clustering. More importantly, the densities in Division 3.300 may only be achieved by providing affordable housing per this article. Article 4 includes additional provisions requiring a variety of lot sizes and a mix of dwelling unit types. This division provides a mitigation incentive, so that developers do not have to subsidize affordable housing and pass on those costs to consumers of market-rate housing. The mitigation incentive provides a 17.6 percent increase in district density. A hypothetical district is shown in Figure 6.201. The teal and blue lines in Figure 6.201 represent the intensity permitted by Article 3 for the district and the red and green lines show the increase possible with the incentives. Developments are permitted this higher density only after having complied with the provisions of Division 6.200. The incentive requires 10 percent affordable units and 5 percent for additional market-rate units. So that the developer does not have to subsidize affordable units required cost reductions are specified. In return for the incentive, the developer is required to reduce the unit cost of affordable units by not including land and infrastructure costs in its calculation. Figure 6.201 shows both the open space and affordable housing incentives that apply.

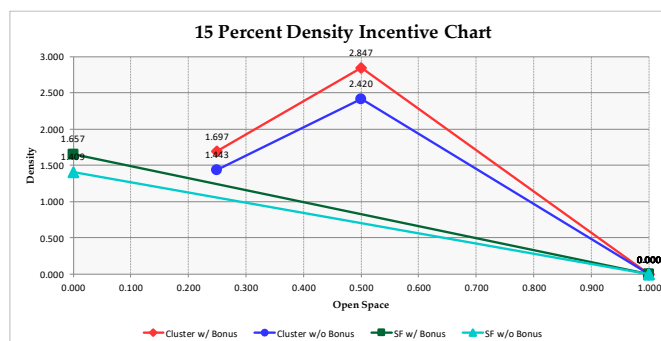


Figure 6.201

Section 6.202 Required Affordable Housing

All developers providing 12 or more housing units shall provide at least 10 percent of the total number of units as affordable housing. "Affordable" means that the units are provided at substantially less than what a market-rate unit would cost as required by Sections 6.203—6.205.

- A. Density-Based. In all districts except UM and UC, the density of development permitted in Article 3 for proposed open space shall be multiplied by 1.176 to determine the total number of units permitted, including affordable units. Affordable units shall be at least 10 percent of the total units.
- B. Multifamily and Mixed Use. Multifamily and mixed-use residential uses are regulated by a floor area ratio (FAR) rather than density. Density is dependent on the floor area of the units and parking and is therefore a poor intensity measure and is not used. A minimum of 10 percent of the units are required to be affordable except as provided in D and E below.
- C. Maximum Value. Whenever the maximum value of an affordable unit, as determined by Section 6.203 or 6.204, exceeds \$250,000, additional approaches in Division 6.300, including payment in lieu of building units, may be required to provide affordable units.
- D. Redevelopment. In redevelopment involving the tearing down of existing housing and/or substantial interior change amounting to 40 percent or more of current value, the following additional requirements shall be met.
 - 1. An analysis of current rents in the structure and nearby similar buildings shall be done prior to a demolition permit being granted.
 - 2. Where the housing agency finds that a substantial number of affordable housing units will be lost, the number of affordable units required shall be increased to maintain the number of existing units. The planning director is authorized to increase building height in stories and total FAR so that, counting the additional units, no less than 20 percent of the floor area is devoted to affordable units. The developer may use any available space for market-rate units.
- E. Luxury Development. In the U, UM, or UC districts, where market-rate multifamily unit floor areas will exceed an average of 2,500 square feet, the planning director is authorized to require that up to 9.5 percent of the floor area or 33 percent of the units be allotted for affordable units. No increase in intensity shall be permitted in meeting this standard. In determining this number, the planning director and housing agency should evaluate affordable units lost and the number of low-income workers the development will permanently employ.

Section 6.203 Affordable Housing Development Pro Forma

Where density is the intensity standard, this section provides for a pro forma (subsections A-I) to review development proposals to ensure the plan provides for affordable units and minimizes the sales price or rents for these units. The pro forma shall include the following elements.

- A. Land Costs. The raw land cost paid by the developer shall be paid for by market-rate units. The cost of land for nonresidential uses is to be separated from that of residential development.
- B. Infrastructure Costs. The total cost of roads, alleys, water and sewer services and other utilities, drainage, common facilities, street trees, and bufferyard landscaping shall be broken down and submitted. Only the costs of running utilities to the unit from these lines and on-lot landscaping shall be excluded from these costs.

- C. **Housing Cost.** The house plans, elevations, exterior materials, and models for each housing type shall be submitted. Affordable units shall have exterior materials and design similar to other units. The unit sizes, design, square footage, and cost per square foot shall be provided.
- D. **Affordable Units.** The applicant shall identify the affordable units and the type of units selected, their floor areas, and number of bedrooms. The developer shall specifically document floor area, interior materials, and other cost savings over market-rate units. The developer is encouraged to use the smallest size in any unit type for affordable housing. Smaller square footages to be used shall be documented. Plans to use less expensive materials for interior trim, floors, counters, and other elements to achieve lower cost per square foot should be submitted. Exterior materials and design shall not be so different from market-rate units that they can be visually identified as such, other than by floor area.
- E. **Site Costs.** Costs of landscaping the lot and running utilities shall be provided or included as a line item in cost per square foot.
- F. **Homeowners' Association.** The developer shall provide special rates for dues to the homeowners' association capped at \$50 per year or 30 percent of the fee paid by other owners, whichever is less, as these can be so high as to force owners of affordable units to sell. These require the approval of the housing agency and planning director.
- G. **Sales Price.** Proposed lot sales prices for market-rate and affordable units shall be provided. A similar type of size and unit shall be compared in this submission. The cost of affordable units shall be based on the following.
 - 1. The cost of land (A above) and utilities (B above) shall be zero. The developer shall spread land and improvement costs among the market-rate units.
 - 2. The construction cost of the actual affordable unit. The developer shall identify size reductions and material and finish savings in cost per square foot and compare them with market units.
 - 3. The intended profit margin on dwelling construction shall be expressed as a percentage and for affordable units shall be equal or less than that for market-rate units. If there are to be home builders other than the developer, then the site and building costs shall be separated, with the builder paying for land only of market units. There shall be documentation that home builders do not pay for the land or utilities used for affordable units and all such costs are charged only to the market-rate units. The builders shall sign agreements with the housing agency to build the affordable units as specified in D above.
- H. **Rental Rates.** The rental rates shall take into account total unit costs amortized over 25 years and operation and maintenance costs negotiated with the housing agency.
- I. **Total Cost.** The total cost of affordable units and market-rate units by type and model shall be submitted.

{Sidebar}

Example: *The cost of the improved lot should be about 25 percent of the total cost of a house. The house shall be constructed on a per-square-foot basis, so a smaller house will be less expensive to build. There can be limited savings in the interior as well. The total savings on an affordable house should exceed 30 percent. The built-in incentive provision for construction of the required affordable units adds no value to*

the raw land. The utility costs would be the same for the site if there were no increase in density. A detailed breakdown is shown below.

1. The average market-rate house in the development goes for \$250,000. This includes a land cost of (25 percent) \$62,500 for the improved lot.

Affordable cost \$0

2. The house costs, including profit, are \$187,500, or \$125 per square foot for a 1,500-square-foot house. The affordable house is to be only 1,350 square feet at \$115 per square foot, costing \$155,250. This reduces cost by \$32,250.

Affordable cost \$155,250

3. The sales price of the affordable unit is \$155,250, a savings of \$94,740 over the \$250,000 unit, or 37.9 percent.

Total cost \$155,250

{/Sidebar}

Section 6.204 Pro Forma for Floor Area Ratios

Multifamily and mixed-use developments controlled by the floor area ratio (FAR) may have units of different sizes. The price of affordable units is set after review and approval of a pro forma. The pro forma shall include the following elements.

- A. Land Costs. This is the raw land cost paid by the developer. This shall be broken down proportionally for floors devoted to residential uses. Floor area devoted to nonresidential uses shall be excluded. The differences in market value of nonresidential and residential uses shall be documented.
- B. Infrastructure Costs. The total cost of road, water, sewer, and other utility improvements that serve the site, common facilities, street trees, and open areas, if any, shall be documented. In mixed-use buildings, these shall be broken down by residential and nonresidential uses.
- C. Parking. Parking shall be proportional to the area required by each land use and all costs associated with parking shall be calculated. The division of costs between uses shall be documented. Total parking may be reduced where uses have different hours of operation., Affordable housing shall not be charged for parking.
- D. Building Cost. The total costs of the building shall be broken down into residential, nonresidential, and parking allocated by spaces to residential and nonresidential use. Allocations between affordable and market residential units shall be based on floor areas, not units. Elevators, lobbies, common areas like halls and stairways, and other amenities shall not be charged to affordable units. In allocating costs, only leasable areas shall be calculated.
- E. Unit Sizes. The mix of units shall conform to the mix of bedroom sizes in Section 4.104 and shall not exceed minimum size but may be smaller when approved by the planning director and housing agency.
- F. Unit Finishes. The interior finishes shall be documented for each unit type so that less expensive finishes and materials can be used on the affordable units. Where the developer has chosen ceiling heights greater than eight feet, the additional cost of higher walls shall not be charged to the affordable units but allocated to market-rate units.
- ~~G.~~ Total Unit Costs. The cost calculated for both affordable and market-rate units shall be grouped by the number of bedrooms. The cost of the rental units shall be amortized over 25 years and the housing

agency shall rent the units and collect operational and maintenance fees. The unit cost shall be the sales price for condominium units.

H.G.

Section 6.205 Approval of Pro Forma The planning director and housing agency director shall review the pro forma to ensure achievement of the desired results. They shall determine that each of the following conditions is met.

- A. Land and improvement costs. These costs are accurately provided from the documents submitted and from the costs associated with improvement guarantees. No land and development approval costs shall be charged to the affordable units.
- B. Units. The exterior of single-family or attached affordable units of the same unit type shall have similar exterior as market-rate housing. They may be of smaller size, and less expensive interior finishes and fixtures are encouraged.
- C. Location. The affordable units should be scattered throughout the development. In multifamily developments, they shall be distributed to all buildings.
- D. Family Size. The housing agency shall certify that the range of units meets the family-size needs of the jurisdiction.

E. Smaller Unit. The unit size should be adjusted down below market unit while providing for number of bedrooms.

F. Cost Per Square Foot. The cost per square foot should reflect using interior finishes, counters, and fixtures that are less costly but are of durable quality.

G. Total Sales or Rental Costs. The requirements above should have maximized affordability. The planning director may direct the use of a different housing type to reduce costs, where a review indicates unit costs are too high. This is done by selecting more dense and smaller housing types. (See Section 6.303.) Other strategies may be recommended where additional reductions could be achieved.

H. Verification. Engineers or building officials may be used to verify costs.

Section 6.206 Subsidized Housing Incentive

Subsidized housing is that which receives low-income housing subsidies from a federal, state, and/or local program. This definition also applies to nonprofit groups that provide housing, where the standards for occupancy and income are consistent with federal standards. This housing type receives an additional density incentive over that provided by Section 6.201. When a project that is directed at providing subsidized housing is submitted, such a project shall receive an incentive of 15 percent over the density permitted to a project that provides affordable housing under Section 6.202A.

- A. Relief from Standards. Such a project may seek relief from the mix requirements of Sections 4.103–105 and the planning director shall grant such relief where it is demonstrated that strict adherence would result in increased unit costs not related to family-size requirements.
- B. Concentration. Concentrations of subsidized housing are detrimental for residents in relation to crime, education, and the neighborhood. The planning director and housing agency shall review the proposal. The review should include data on the percentage of subsidized units in the community that the project would create, as well as on the unmet demand for subsidized housing. The review should look at the concentrations of low-income families, using housing census or local data on block, neighborhood, and community. If the percentage of subsidized housing in a census block would reach more than 30 percent, the bonus shall not be awarded. A written finding of the facts shall be provided to the developer and to any funding agency that is providing subsidies.

- C. Subsidized Units. To be eligible for this bonus, at least 30 percent of the units in the project shall be subsidized. The rest of the development shall meet the affordable housing requirements of Section 6.202.
- D. Incentive Effect. The density permitted on a site in Division 3.300 shall be multiplied by 1.15, meaning that the developer is receiving a total incentive of 32.7 percent.

{Sidebar}

Example: A site is permitted 100 dwelling units (DUs) by Article 3. A project providing subsidized housing receives the affordable housing incentive (1.176 multiple, provided under Section 6.202A), increasing units to 117. Through the application of the subsidized housing bonus, a total of 135 units will be permitted ($117.6 \times 1.15 = 135$, with units being rounded down to the next whole number). The developer thus receives a 35 percent increase over the by right density.

{/Sidebar}

Section 6.207 Maintenance of Affordable Housing

All affordable units shall be required to have an agreement with the housing agency for the management, rent, or sale of such units, provisions to ensure they are properly maintained by the agency and/or management and remain affordable.

- A. Management. The agreement shall provide for periodic inspection of the units. Landowners shall be provided with copies of any correspondence regarding the unit's maintenance, or failure thereof, by unit owners or renters as well as management. The housing agency shall retain the record of inspections.
- B. Eligible Tenants. Before the rent or sale of a unit, the housing agency shall verify the eligibility of the tenant or purchaser.
- C. Rent. Rental rates shall be approved by the housing agency and may be increased only with the cost of living or needs for maintenance.
- D. Property Owners' Association. Owners or renters shall only be responsible for fees as specified in Section 6.303F. Any proposed changes shall be approved by the housing agency.
- E. Sale. The sale of any affordable housing unit shall be controlled by the housing agency. The increase in value shall be limited to changes to the cost-of-living index rather than comparing similarly sized market-rate units. Adjustments shall be made for any improvements done by the owner.
- F. Eviction. All eviction notices shall be reviewed and approved before any action is taken.

DIVISION 6.300 AFFORDABLE ALTERNATIVES

Section 6.301 Purpose

There will be situations in which the provisions of Division 6.200 are inadequate to supply affordable housing at prices that are suitable. This includes developments too small to provide a single unit and developments where the provision of affordable units is considered inappropriate due to a location so remote from work, shopping, or services as to be unsuited for residents in need a fee in lieu of payment may be required. The planning director, where the cost of affordable units is too high, is permitted to modify plan proposals to produce affordable units as indicated in Sections 6.303–6.306.

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Section 6.302 Fee-In-Lieu

When the cost of an affordable unit in the pro forma (Sections 6.203 and 6.204) exceeds \$250,000 for developments of less than 12 units, or where the planning director and the housing agency determine that on-site affordable units are not desirable, a fee-in-lieu shall be collected. The following shall be used in ~~approving~~ the fee-in-lieu.

- A. Pro Forma. The pro forma shall be reviewed to determine whether affordable housing at the site is not possible under other provisions of this code. In doing so, the pro forma shall be evaluated as follows.
1. It shall be determined whether the use of housing types or lot sizes other than those proposed would make affordable housing possible.
 2. It shall be determined whether the house size proposed could be reduced in order to lower costs. Table 6.302 shows minimum unit sizes by number of bedrooms. Small-family units may be authorized as substitutes where the housing agency confirms there is a need for smaller units.

Table 6.302 Bedroom Size		
Unit Type	Bedrooms	Square Feet (sf)
Single-Family	2	900
	3	1,150
	4	1,400
	5	1,900
Two-Family or Attached Single-Family	2	800
	3	1,050
	4	1,300

- B. Determination of Unsuitability. Unsuitability can result from great differences in unit size, the site location with regard to work opportunities, or the inability to blend units into the development.
- C. Construction. The housing agency shall be required to use the fee-in-lieu for the construction of new affordable units or the acquisition of existing units that will be converted to affordable housing.
- D. Fee-In-Lieu. The fee shall be the amount the lot of the type proposed for affordable housing is to the cost of the affordable unit in the pro forma plus the cost of land for a market unit.

{Sidebar}

Example:

Small development on average lot (45,000 sf)

Cost of market unit: \$1,529,333

Cost of land: \$381,333

Cost of house: 5,200 sf @ \$220/sf = \$1,144,000

Cost of smaller affordable house: 1,300 sf @ \$220/sf = \$286,000

Fee-in-lieu. \$286,000 + \$381,333 = \$ 667,333

{/Sidebar}

Section 6.303 Different Unit Types

The planning director shall have the authority to require a smaller lot size or other housing type to ensure affordable units can be provided. The following standards shall be met.

- A. Type. Where two or more affordable units are required, smaller housing types such as a twin, duplex, carriage unit, townhouse, multiplex, or neighborhood multifamily unit may be required. With a carriage house or twin home, it is possible for one part to be market-rate and the other affordable, with different floor areas.
- B. Location. Where practical, affordable housing that is of a different type shall be scattered in the development rather than concentrated in one location, where the number of units permits.
- C. Differentiation. Where less than four affordable units are required, the affordable units can be designed to fulfill a purpose such as a gate house. Where there is a need on the development for lower-income employees for uses such as a golf course, or equestrian community, worker housing (Section 6.306) may be appropriate even though the units are clearly different from the market units.
- D. Design. In the development of single-family homes, multi-unit buildings that are designed to appear to be large single-family homes can be used. In appearance, such units should be similar in size, façade, and materials to other homes in the development. Garages shall be designed and located so the units appear to be single-family.

Section 6.304 Small-Family Units

The small-family unit (Section 4.302) is affordable and is permitted as the sole use of a parcel. Small-family units may also be permitted as required affordable units in a development if the following conditions are met.

- A. Need. The housing agency shall determine that there is a need for such one- or two-person affordable units within the jurisdiction's current population. The agency may limit the number of such units in the development.
- B. Location. The planning director and housing agency shall determine whether the location is suitable for such units based on the proposed population for which they are designed, so that tenants can walk to stores, services, or employment. In order for approval, they shall determine that the tenants would benefit from such location.

Section 6.305 Accessory Units

Accessory units are generally undesirable in new construction because two-family units can serve the same function and be designed to look like single-family homes. The planning director is authorized to permit or mandate one accessory unit to serve as affordable housing only where it is found that alternatives do not work. The following standards shall be met.

- A. Size. The units shall have two to three bedrooms if they are approved by the housing agency as meeting local needs and there is sufficient possibility for tenants to be employed in the district.
- B. Type. Accessory units may be in the primary dwelling.
- C. Management Agreement. The unit shall have a management agreement with the housing agency that runs with the land. This shall require the landowner to maintain the unit and provide rentals that meet

agency standards. The owner may not cease renting without providing a new affordable unit that has the same number of bedrooms.

- D. Housing Agency Approval and Acceptance. The housing agency shall be authorized to accept up to a 60-year lease, at no cost to the agency, as a means of maintaining the unit's availability.

Section 6.306 Worker Housing

One or more housing units on a property may be designated houseworkers who work in the residential development. These may be units located at the entry to the development or associated with another activity on the development, such as a golf course or stables. They shall be integrated into the development plan and residents of the affordable units shall have full access to amenities on the site. The following standards shall apply.

- A. Affordability. As per Sections 6.303 and 6.304, no land or improvement costs shall be charged to worker housing. The planning director and housing agency shall ensure that the size and cost per square foot of the units are appropriate to affordable housing and that façades do not identify the units as affordable.
- B. Eligibility. In general, the tenants shall be employed in the development. The housing agency must approve eligibility and determine that the wages paid are based on market conditions and not reduced based on the availability of housing to tenants.
- C. Common Facilities. Tenants or owners of affordable housing units shall have access to all facilities and shall pay no fees for access, even if the facilities require membership.
- D. Control. Priority in renting or buying the units shall be given to employees. The housing agency shall be able to locate non-workers in the housing if there are no employees of the development who seek the housing.

DIVISION 6.400 TRANSFERABLE DEVELOPMENT RIGHTS (TDR)

Section 6.401 Purpose

Transferable Development Rights (TDRs) provide a means of preserving rural land, natural resources, buildings, or sites from development. TDR creates a system where the jurisdiction designates land to be preserved and, instead of the jurisdiction paying for the loss in value, it creates a receiving zone where developers pay landowners to preserve the land by purchasing their development rights. Rural landowners are given development rights and receiving zones are created for the purchase and transfer of the development rights (Sections 6.403–6.408). Purchasers in the receiving zone can develop at an increased density. The system creates a market where willing buyers can purchase development rights from willing sellers. This limits the amount of land that can be preserved. Sections 6.409 and 6.410 provide simpler alternative TDR strategies that encourage transfers but also allow development. Division 6.500 provides a countywide TDR system. See Appendix B for how to set up a workable system.

Section 6.402 TDR Use Equivalents

Uses or housing types affect how much a developer will pay for a TDR. The developer of a luxury single-family lot can pay more for a TDR than that of a multifamily unit. Table 6.402A shows the TDRs required

for residential uses and 6.402B shows the number required for nonresidential uses. These tables should be used for all TDR programs other than Section 6.608.

Table 6.402A TDRs Required for Residential Dwelling Units (DUs)	
Use	TDRs per DU
Small Single-Family	0.2
Single-Family under 1,600 sf	1.0
Single-Family 1,600–2,399 sf	1.2
Single-Family 2,400–3,199 sf	1.4
Single-Family 3,200–3,999 sf	1.7
Single-Family 4,000–4,799 sf	1.9
Single-Family 4,800–5,999 sf	2.3
Single-Family 6,000–8,000 sf	2.7
Single-Family more than 8,000 sf	3.5
Attached Single-Family under 1,600 sf	0.8
Attached Single-Family over 1,600 sf	0.9
Multifamily under 1,200 sf	0.7
Multifamily over 1,200 sf	0.8
Small Multifamily	0.2

- A. Residential. Table 6.402A provides information on how many TDRs builders of different types and sizes of residential uses must acquire. The base level is one TDR for a single-family dwelling unit that has a floor area of 1,600 square feet or less.
- B. Nonresidential. Table 6.402B provides information on how many TDRs builders of nonresidential uses must acquire. The base level of one TDR for a single dwelling unit that has a floor area of 1,600 square feet or less is used to determine values for nonresidential use.

Table 6.402B TDRs Required for Nonresidential Uses		
Use	TDRs	Unit
Gas Station	0.3	pump island
Other Light Auto Service	2.0	1,000 sf
Restaurant Outparcel	3.3	1,000 sf
Retail under 10,000 sf	2.7	1,000 sf
Retail 10,000–29,999 sf	3.0	1,000 sf
Retail 30,000–70,000 sf	3.2	1,000 sf
Retail over 70,000 sf	3.4	1,000 sf
Service	2.3	1,000 sf
Office Class A	3.0	1,000 sf
Office, Other	2.7	1,000 sf
Research	2.9	1,000 sf
Industry	2.3	1,000 sf
Warehousing	2.1	1,000 sf
Indoor Entertainment	2.0	1,000 sf
Outdoor Entertainment	1.5	1 ac
Indoor Recreation	1.3	1,000 sf

Outdoor Recreation	0.1	1 ac
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- C. Use. The developer in a TDR receiving zone shall have an agreement to purchase the TDRs needed for the proposed development at the time of application. TDRs shall have been transferred or purchased prior to receiving final development approval.

Section 6.403 Sending Zone

The sending zone consists of a 6,750-acre area of land zoned Rural TDR Overlay (RO). This overlay requires the land to be preserved as open space but grants landowners development rights that they may sell.

- A. Agricultural Sending (RO). This is designated on the zoning maps as sending overlay RO, indicating that landowners will receive TDRs as follows.
- B. Eligibility. The following land is not eligible for receiving development rights.
1. Land in existing public rights-of-way is not eligible.
 2. Land in utility easements or owned by utilities where such utilities are present is not eligible.
 3. No development rights shall be issued for floodplain, wetland, and waterbodies, as land in these categories is unbuildable.
 4. Properties of 12 acres or less with an existing dwelling shall receive no development rights.
 5. Small vacant properties under 20 acres may choose to accept TDRs and may develop one house on the property. However, if the size of the unit is greater than 1,600 square feet, the owner must secure the additional development rights.
 6. Land whose development rights have been sold or are under a sales agreement, unless the purchaser is an agricultural operation, is not eligible.
 7. Publicly owned land is not eligible.
- C. Allocation. Eligible land shall receive 1.15 TDRs per acre with one TDR subtracted for every existing dwelling.
- D. Fractions. Where the development rights to be allocated comes up as a fraction, fractional TDRs are allocated to the nearest tenth.

Section 6.404 Receiving Zone

{Sidebar}

The E, S, AU, and U districts have been rezoned to these levels as part of the creation of the sending zone. The increase in zoning density is what provides the density in the receiving zone to purchase TDRs. Receiving zones should not be created by downzoning.

{/Sidebar}

Land in the E, S, AU, and U districts is designated as a receiving zone. In all districts, the density or intensity is determined by the district and site-capacity calculations (Division 3.200). The first 40 percent of that density may be built by right. The remaining 60 percent requires the purchase of development rights. The number and type of unit, square footage, and type of use shall be noted. The number of TDRs required is determined by multiplying the TDR value from Tables 6.402A or B for the building proposed by dwelling units or for nonresidential by the thousands of square feet of floor area.

Section 6.405 Notification of TDR

Within six months of adoption of this ordinance, the county shall notify in writing all landowners in the sending districts of their allocation of TDRs. The notification shall include a form to serve as a record of ownership. The following additional regulations apply.

- A. Landowner Inquiry. Landowners may write to the planning director or come to the zoning office prior to receiving written notice in order to determine the number of TDRs they have been allocated.
- B. Recording. The county shall record the ownership of TDRs at the recorder of deeds office based on the notices sent to each landowner. The landowners shall be listed as the owners of the parcel(s) allocated to them.
- C. Selling TDRs. A landowner who has received his allocation from the planning director or zoning office is eligible to sell those rights.
- D. Appeal. A landowner has 120 days from the date of receipt of the written notification to appeal the allocation to the Zoning Board of Appeals (ZBA). The sale of any TDR automatically voids the right of appeal.

Section 6.406 Sale of TDR

A landowner may sell TDRs to a developer or other persons. Such a sale shall require the deed to be transferred to the new owner. It shall meet the following requirements.

- A. Recording. The deed to the TDRs shall be transferred to the purchaser and recorded in the recorder of deeds office. If the sale is not for all TDRs on the parcel, the remaining TDRs after sale shall be recorded. Where all TDRs are sold, a recording shall be made indicating that there are no remaining TDRs on the property.
- B. Attachment. The TDRs may be recorded as being attached to a new property (typically for development purposes) or held by the new owner, unattached to a specific parcel. Once an application for development is submitted, the TDRs must be recorded as attached to the development parcel.
- C. Subdivision or Land Development. Upon approval of a building permit using TDRs, the deed shall be transferred to the county at no cost and recorded as "used."

{Sidebar}

Internal TDR

This form of TDR does not have a sending or receiving district. It encourages the owners of multiple properties to concentrate development on one property. Internal TDR is an alternative to be used where the creation of a narrowly defined sending zone is not politically acceptable. There are two methods for this, noncontiguous development (Section 6.407) and interdistrict TDR (Section 6.408).

{/Sidebar}

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Section 6.407 Noncontiguous Development

This form of TDR does not involve the creation of formal TDRs. Landowners who own multiple parcels which may not be contiguous may submit development plans using all of their land, contiguous or noncontiguous. The site-capacity calculation shall be conducted for each noncontiguous property in its entirety and for the parcel where development will occur. A secondary purpose of this technique is to encourage development in rural areas closest to major roads or nearby communities with full services.

- A. Ownership. All the land shall be held by the owner. Where there are multiple owners, it shall be a common group. The application shall bind all the owners.
- B. Development. The development shall occur on one parcel(s), leaving other parcels with no development. A lot split or lot combination may be part of the application to make this easier.
- C. Plan. The application shall have a detailed plan that meets major subdivision standards. A small-scale plan shall show all the parcels involved and any intervening property. In this plan, parcels to be designated as common open space and the parcel(s) to be developed shall be identified.
- D. Plan Review. The planning director shall review such developments to encourage the following.
 - 1. The development should take access to major roads in order to leave rural roads for rural traffic and avoid improving these roads.
 - 2. The development should be on the closest parcel to a municipality in order to reduce commutes.
 - 3. The development should be near a prior development in the zone.
- E. Conservation Easement. The plan shall designate areas of the plan as rural land with agriculture, forestry, or natural areas, with uses specified. These areas shall be placed in a conservation easement.
- F. Buffers. There shall be a bufferyard with a minimum width of 50 feet and an opacity of 0.4 around the developed portion of the property.

Section 6.408 Interdistrict TDR

Within the Agriculture (AG) district, landowners may buy and sell TDRs and use them to concentrate development, or to create hamlets. Each purchase and sale shall meet the following standards.

- A. Allocation. One TDR is allocated for every 25 acres, rounded to the tenth of a TDR. Vacant parcels of less than 25 acres shall have the TDRs calculated to the nearest tenth. A property owner may choose to develop one house on the property. However, if the size of the unit is greater than 1,600 square feet, the owner must secure the additional development rights for larger dwellings.
- B. Existing Dwellings. For the purpose of calculating TDRs, five acres shall be subtracted from a property for every dwelling unit on that property.
- C. Eligibility. The following land is not eligible for receiving development rights.
 - 1. Land in existing public rights-of-way is not eligible.
 - 2. Land in utility easements or owned by utilities where such utilities are present is not eligible.

3. No development rights shall be issued for floodplain, wetland, and waterbodies, as land in these categories must be preserved as open space.
4. Land whose development rights have been sold or which is under conservation or other easements that limit development is not eligible.
5. Publicly owned land is not eligible.

Division 6.500 MANDATORY COUNTYWIDE TDR

{Sidebar}

This is the most effective form of TDR possible. It is designed to preserve large areas of land. As written, the section requires county/municipal intergovernmental agreement that makes the municipalities receiving zones, legislation would mandate the county municipal cooperation. See Lane Kendig, "Model Enabling Legislation for Rural County Planning and Zoning," Zoning Practice, (American Planning Association) no. 7 (July 2014). Major problems with county TDR are inadequate market size and municipal annexation. Countywide TDR concentrates development in the municipalities within the county, so all development must purchase TDRs. The object is the preservation of the rural economy, turning unincorporated land planned for annexation into the receiving zone for TDR that protects rural land from development.

{/Sidebar}

Section 6.501 Mandatory Countywide TDR Structure

The county has an intergovernmental agreement with all the villages and cities in the county. The agreement provides growth areas for all the municipalities and a rural area designation for the rest of the county. The municipalities agree to be the receiving zone for TDRs issued to landowners in the county and require all land within their boundaries to become receiving zones (Section 6.503) where TDRs are required to develop. The county has identified sending zones as the agricultural (AG) and Natural (N) districts. Landowners are issued development rights as specified in Section 6.502.

Section 6.502 Sending Zone Allocation

There are 185,000 acres in the AG and N districts. Development rights are allocated to landowners in those districts according to the following requirements.

- A. Allocation. Each landowner shall receive one TDR for each 30 acres of land. If there are homes on the property, five acres shall be subtracted to determine the area for which TDRs will be allocated. Owners with more than one parcel shall have one allocation for all their properties.
- B. Parcels of Less than 30 Acres. These properties shall receive partial allocations, calculated to the nearest tenth of one TDR after five acres are subtracted for any existing dwelling units.
- C. Eligibility. The following land is not eligible for receiving development rights.
 - 1. Land in public rights-of-way is not eligible.
 - 2. Land in utility easements or owned by utilities where such utilities are present is not eligible.
 - 3. No development rights shall be issued for land below the high-water level of waterbodies.
 - 4. Land whose development rights have been sold or that is under a conservation easement is not eligible.
 - 5. Publicly owned land is not eligible.
- D. Ownership. TDRs shall run with the land. Ownership changes with the sale of the land.

Section 6.503 Receiving District

A receiving district is land in city and village boundaries and in the growth boundaries of those communities. In addition, developments in the Unincorporated Place (UP) district are considered receiving zones. All increases in density via rezoning must purchase TDRs to achieve the new intensity.

- A. Rezoning. Prior to a property being rezoned, property owners shall certify that they understand that in order to receive building permits for the zoning received, they will have to purchase TDRs. The amount required shall be the difference in density or intensity between the prior and new zoning.
{Sidebar}

Example:

If a 10-acre property zoned for five lots is rezoned to permit three dwelling units per acre, the developer would purchase 25 TDRs to achieve the maximum intensity.

{/Sidebar}

- B. Annexation. For an annexed property, the county's prior zoning shall be considered the base zoning and any increase in intensity shall be considered a rezoning.
- C. Unincorporated Place (UP). In this district, any parcel having a capacity for more than two units shall have to acquire TDRs for such development.

Section 6.504 Value of TDR

The type of development proposed determines the number of TDRs required. Tables 6.402A and B provide the value of a TDR for land uses or unit sizes.

Section 6.505 Use of TDR

TDRs are needed to implement rezoning and to receive an approved development plan. The following must occur prior to the use of TDRs to develop new buildings.

- A. Rezoning. When rezoning is requested, the petitioner shall be informed that 10 percent of the needed TDRs must be under an agreement of sale prior to the rezoning taking effect.
- B. Development. Prior to receiving final approval of a redevelopment plan, the developer shall present to the jurisdiction sufficient TDRs for the proposed development. The jurisdiction shall ensure that these TDRs are recorded in the recorder of deeds office.
- C. Building Permit. When a building permit is awarded for any building, the jurisdiction shall instruct that the TDRs be marked as used and recorded as such.

Section 6.506 Notification of TDR

Within six months of adoption of this ordinance, the county shall notify in writing all landowners in the Agriculture (AG) or Natural (N) district of their allocation of TDRs. The following additional regulations apply. The notification shall include a form to be recorded as a record of ownership.

- A. Landowner Inquiry. Landowners may write to the planning director or come to the zoning office prior to receiving written notice in order to determine the number of TDRs they have been allocated.
- B. Recording. The county shall record the ownership of TDRs at the recorder of deeds office based on the notices sent to each landowner. The owners shall be listed as the owners of the parcel(s) allocated to them.

- C. Selling TDRs. The jurisdiction compiles the total number of TDRs allocated. A TDR board consisting of two council members, the assessor, and two TDR owners shall maintain the current value of TDRs annually. Developers must buy TDRs from the jurisdiction at that value. At the end of the year, the county shall total the dollars from all sales in that year and distribute to all owners their share of the sales. The share is the percentage of total TDRs owned by the landowner.
- D. Appeal. A landowner has 120 days from written notification to appeal the allocation to the ZBA. The sale of any TDR automatically voids the right of appeal.

Section 6.507 Sale of TDR

A developer shall purchase TDRs from the jurisdiction's TDR board as specified in Section 6.508. This is done so as to make annual payments to the owners of TDRs for the value of a TDR over time when annual sales are small in relation to the TDRs issued. The jurisdiction shall collect a fee of \$100 for making a sale to cover administration costs.

Section 6.508 TDR Densities

The maximum density using TDRs is determined by the rezoning of the property in the municipality. The actual density achieved on the property is determined by the development plan and the TDRs that are used. The developer may request the maximum development or some lesser amount based on the TDRs presented.

Section 6.509 Jurisdiction Duties

The jurisdiction through its TDR board is responsible for the tracking and selling of TDRs. The TDR board shall have the following duties.

- A. Membership.
- B. Sales. The board shall sell TDRs to developers at the then-current annual value.
- C. Distribution of Money. Annually, the money received from the sale of TDRs shall be distributed proportionally to all owners of TDRs. The TDR board shall produce an annual report on the sale of TDRs and the remaining amount of TDRs. The report shall be mailed to landowners with the coming year's tax bills.
- D. TDR Value. The board shall review the sales of homes and other uses, assessments, and changes in values. From this data, the board shall revise TDR value to reflect market changes and two months before the start of a new year, shall identify the value of a TDR for the coming year.
- E. Ownership. All land sales shall be tracked. When land is sold, the new owners shall be identified and distributions made to the new owners. The sellers of land may contact the TDR board to determine what the current distribution would be at the time of the sale. This information shall be used as an item in the sales contract to ensure proper distribution when a sale is made.

DIVISION 6.600 HISTORIC PRESERVATION

{Sidebar}

This section provides a number of different options for historic preservation. Some have to do with flexibility needed to assist landowners achieve preservation (Sections 6.602, 6.603, 6.605, 6.606. and 6.607). Section 6.604 is oriented

to counties where there are often sites rather than districts. Section 6.608 is designed for urban areas where it is desired to preserve single historically valuable buildings. The design standards for HO districts are in Division 11.700.

{/Sidebar}

Section 6.601 Purpose

This division provides incentives for historic preservation that apply to any Historic Overlay (HO) district and modifies the standards of the underlying district, imposing design standards that preserve the historic character (Division 11.700). Sections 6.602 and 6.603 apply to HO districts. Sections 6.604–6.606 address individual sites–. Section 6.609 addresses a scale preservation district.

Section 6.602 Change to Residential Use

Where the district underlying an HO district is a Neighborhood Conservation (NC) district where only single-family units are permitted, the historic commission may permit two- or three-family units or multifamily units as permitted by the planning director, after meeting the requirements of C below in order to provide adequate market value for the property in return for the preservation of the building's historic character.

- A. Analysis. The planning director, in conjunction with the historic commission, shall modify the permitted use of an applicant's historic structure upon reviewing a request for a change of use.
- B. Application for Change of Use. The applicant shall submit pictures of the current and proposed building façades, existing and proposed floorplans, and a pro forma justifying the change of use and density in light of the existing value, cost of modification, and proposed value.
- C. Approval. The change of use shall be approved when the planning director is notified that the historic commission has determined that the following requirements have been met.
 - 1. The property value as is will generally lead to disinvestment through a lack of maintenance of the structure, lessening its historic value and potentially adversely affecting the values in the neighborhood.
 - 2. The proposed change in use and density will provide a value that ensures long-term maintenance of the historic structure.
 - 3. The proposed improvements do not alter the historic character of the structure and any changes to the façade are to the rear or side, where the street's character and historic values are not altered.
 - 4. The change in value does not exceed what is needed to make historic preservation feasible for the district.

Section 6.603 Change to Nonresidential Use

Where the district underlying an HO district is residential, the use of a building may be changed to permit nonresidential uses; generally, these are office, institutional, or, in some cases, mixed uses with retail or service uses, to provide adequate market value for the property in return for the preservation of the building's historic character.

- A. Analysis. The historic commission shall analyze the property's condition, need for renovation, and value to determine the need for a change of use and the ability of such change to allow the preservation of the historic structure.

- B. Application for Change of Use. The applicant shall submit pictures of the current and proposed building façades, existing and proposed floorplans, and a pro forma justifying the change in use and density in light of the existing value, cost of modification, and proposed value.
- C. Approval. The change of use shall be approved when the planning director is notified by the historic commission that the following requirements have been met.
1. The existing property value will generally lead to disinvestment through a lack of maintenance of the structure, lessening its historic value and potentially adversely affecting the values in the neighborhood.
 2. There is strong economic pressure, due to the area's location or the street on which the property is located, to convert from residential to nonresidential uses.
 3. The proposed change in use and density will provide a value that ensures long-term maintenance of the historic structure.
 4. The proposed improvements do not alter the historic character of the structure and any changes to the façade are to the rear or side, where the street's character and historic values are not altered.
 5. The change in value does not exceed what is needed to make historic preservation feasible for the district.

Section 6.604 Historic Sites

The table in this section shows examples of historic sites, all of which are on large tracts where open space is required around the buildings or designated garden areas. Table 6.604 identifies the historic properties in the S and E zones. Sections 6.605–6.607 include incentives that apply to these areas. Figure 6.604 illustrates the protection area around various types of sites.

Table 6.604 Historic Sites				
Name	Address	Acres	Zone	Comments
Holmes Farm	4089 Swamp Rd	126	S	Limited area for preservation
Jackson Farm	313 Town Line Rd	178	E	Other resource limitations
West Church	7608 Oaktown Rd	56	E	Church yard leaves little development potential
The Beeches	27 Hilltop Rd	28	E	Limited area for development

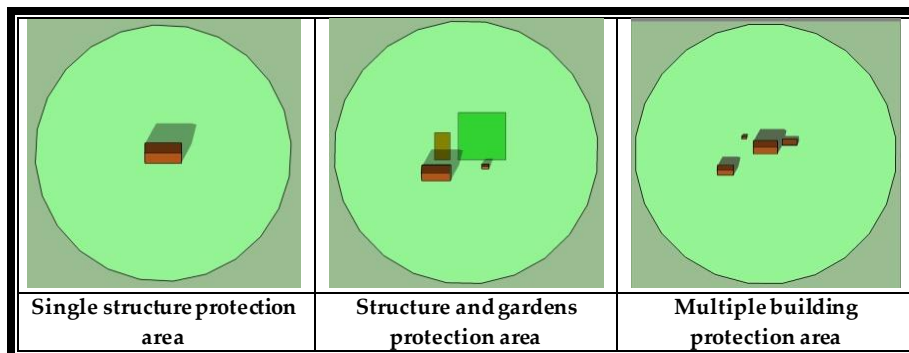


Figure 6.604 Protection areas

Section 6.605 Incentives for Maintenance

Old structures often were built of materials such as stone, brick, wood, or logs which, as they age, require significant repair costs to make preservation feasible and prevent further deterioration. This section is designed to provide an incentive for the investment needed to preserve the historic structure. This section shall also take into account the operation and maintenance of any gardens or agricultural land associated with the historic site. The following may be granted by the planning director and historic preservation board as incentives to preserve the historic structure and context where such factors cannot be addressed by Sections 6.502 and 6.503, typically on properties where there is development potential on the site.

- A. **Agricultural Buildings.** Where some of the buildings on the site are agricultural or other outbuildings that are important to the preservation of the character of the residential structure, the conversion or replacement of these buildings may be permitted. Where the building façades need to be revised to make them suitable for new uses, the planning director and historic commission are authorized to permit changes to the building façades and floor plans.
- B. **Replacement.** The only buildings that may be replaced are secondary sheds or other low buildings less than 15 feet high and less than 1,000 square feet in floor area. Barns or grain elevators shall not be replaced. The planning director, in consultation with the historic commission, shall review possible uses of such buildings for storing maintenance or other equipment. If there is no use, the building may be torn down.
- C. **Application.** The applicant shall submit pictures of the current and proposed building façades, existing and proposed floorplans, and any change in use. A pro forma justifying the proposed incentive shall be submitted. It shall indicate changes in revenue due to any change in use. It shall document the costs of improving the structure and cost of long-term maintenance. These costs shall be summarized and included in a proposed value with the change in use, density permitted, and incentives provided.
- D. **Approval.** The change in use shall be approved where the planning director and historic preservation board determine that the following conditions are met.
 - 1. The existing property value will generally lead to disinvestment through a lack of maintenance of the structure, lessening its historic value and potentially adversely affecting the values in the neighborhood, or the existing property value is so far below development value that without a change in use the property owner will let it deteriorate or seek demolition. Where a replacement building is to be constructed, it shall retain the scale, materials, and character of the building it replaces, while providing for a new use.
 - 2. The proposed changes in use and density or replacement building(s) will provide a value that ensures long-term maintenance of historic structure and grounds to retain the character of the existing site.
 - 3. The proposed improvements do not alter the historic character of the site and any changes to the façades or buildings maintain the historic character consistent with reuse. Parking is to the rear or side, where the street views and historic values are not compromised.
 - 4. Agricultural and other buildings may require extensive façade changes to provide windows and access, or, for smaller outbuildings, a new building as a replacement. Wherever possible, the modifications shall be on façades that do not face the street.

5. The change in value does not exceed what is needed to make historic preservation feasible for the district.

Section 6.606 Clustering

This section is intended to provide rules for the use of clustering to achieve the preservation of large sites that have historic resources requiring open space to be preserved around them. This ordinance permits clustering, and the following are additional criteria that enhance or modify those provisions.

- A. Clustering. While the ability to cluster makes preservation easier, the placement of the building on the parcel, other resources that require protection, or other features of the site can make it difficult to achieve maximum district intensity on a site. In addition, the costs of preservation addressed in Sections 6.602–6.604 may require additional units. The planning director and historic preservation board may adjust the plan to permit clustering that achieves protection in the E and S districts. No adjustments are needed for CS, AG, or N districts.
- B. Approval of Site Plan. The planning director may require more than the minimum open space from the site-capacity calculation (Division 3.200) but shall not require an open space that would lower the maximum intensity in the district.
- C. Cluster Inadequate. Where maximum intensity and any preservation incentives cannot be achieved with clustering on-site, either because more open space is required or the needed units cannot be provided, the planning director shall direct the developer to use TDRs (Section 6.607).

Section 6.607 Historic Site TDR

The historic and cultural sites are contained in Table 6.604. Where these sites are too small or constrained to use clustering to achieve the desired preservation, the TDR in this section shall be used to achieve the preservation required.

- A. Subdivision. When a subdivision is proposed, the developer shall submit a cluster plan with the maximum development possible. A second plan that fully protects the resources on the site including historic protection shall be submitted. The loss in units with protection shall be identified.
- B. Incentives. The planning director shall determine that a shift in dwelling units will not reasonably achieve maximum density using dwelling unit types compatible with the historic site. The planning director may then issue the needed TDRs based on the number of units that cannot be built with the required historic protection.
- C. Receiving District. All land within one mile of the historic district, except land zoned NC, shall be in the receiving district. The density in the receiving district shall be increased by 5 percent over the maximum intensity for that district, as shown in the figures in Division 3.300. That intensity may be achieved at the open space ratio (OSR) calculated for the site (Division 3.200) without requiring additional open space to meet that required for maximum density. The planning director shall calculate the TDR absorption potential of the land within one mile. If this absorption potential is not at least five times the TDRs that are to be sold, the planning director is authorized to extend the radius to as much as two miles to achieve the needed absorption.

- D. Purchase of Development Rights. To ensure a ready market for TDRs and to prevent differences in value between buyers and sellers, each purchaser shall receive the right to build 1.2 dwelling units for each TDR purchased.
- E. Planning Department Actions. The planning department shall take the following actions.
 - 1. It shall notify all property owners in the TDR zone of the availability of TDRs to increase the development value of their property.
 - 2. When a subdivision is submitted in the TDR zone, the planning director shall notify the developer of TDR availability and may require the submission of a subdivision or alternative subdivision using TDRs. The planning director is authorized to delay processing of the plat for up to 120 days in order to give the developer time to enter negotiations to purchase TDRs.
- F. Parcel Splits. Where a parcel split is proposed, it shall be determined whether the proposed split will make it impossible to protect the resource or will place the protection requirement on the purchaser of the second parcel. The planning director shall educate the property owner regarding the potential effect of a lot split on value or potential damage to the resource. The planning director may develop or require to be developed a cluster plan for the entire property that meets the preservation requirement and illustrates a lot split that allows the plan to be achieved. A lot split that makes protection impossible shall be denied.
- G. Notice. The planning department shall periodically send preservation notices to owners of historic properties explaining how to work with developers while providing life rights and maximum preservation of the historic buildings and their surroundings.

Section 6.608 Historic Urban TDR

Individual historic buildings or a small group of such buildings in the AU, U, UM, or UC districts may have existing floor areas substantially less than permitted in the district. The only way to ultimately protect those buildings is to allow for the transfer of their excess development potential to other sites. The rights are calculated by using the existing floor area and dividing by lot area to determine the existing FAR. The permitted FAR of the district is multiplied by the lot area to determine the permitted square footage. The maximum square footage minus the existing floor area equals the square feet available. This provides the square footage differences with a TDR being equal to 1,000 square feet. This is shown with calculations in Table 6.608.

- A. Receiving Zones. All AU, U, UM, and UC districts contiguous to the site are the receiving zone. If the historic site is in an S district, the receiving zone consists of contiguous U, AU, and S districts.
- B. Notification. The planning director shall notify owners of all historic properties by registered mail of the TDRs they have available.
- C. Sale and Usage. The owners may sell TDRs to any landowner in the receiving zone. The purchaser shall receive development potential of 1,100 square feet per TDR to insure the market for sales is viable.

Table 6.608 Historic Designations					
Name	Address and lot area	Square Feet (sf)	Existing FAR	Zoning FAR	Available TDRs
Oreo Factory	1122 Oak Street (645,000 sf)	200,000	0.31	0.44	83.9 ¹
Richfield Mansion	78 Forest Road (32,500 sf)	13,000	0.40	1.00	19.5 ²
5th Street Church	28 5th Street (83,300 sf)	15,000	0.18	2.50	193.3 ³
¹ Existing FAR = 200,000 sf / 645,000 sf = 0.31 Permitted FAR = 645,000 x 0.44 = 283,900 sf Available TDRs = 283,900-200,000 = 83,900 sf or 83.9 TDRs					
² Existing FAR = 13,000 sf / 32,500 sf = 0.4 Permitted FAR = 32,500 x 1.0 = 32,500 sf Available TDRs = 32,500 - 13,000 = 19,500 sf or 19.5 TDRs					
³ Existing FAR = 15,000 sf / 83,300 sf = .18 Permitted FAR = 83,300 x 2.50 = 208,300 sf Available TDRs = 208,300 - 15,000 = 193,300 sf or 193.3 TDRs					

Section 6.609 Scale Preservation Purpose

{Sidebar}

This section is intended to prevent teardowns. It provides rules for redevelopment that allow modernization and limited increases in floor area while retaining scale. Due to age, the homes are not well-suited to current lifestyles in terms of room size, storage, kitchens, or baths. Currently, in these neighborhoods are homes are torn down and replaced with larger high-value housing. This displaces residents of more affordable housing. This applies only to a limited number of neighborhoods.

{/Sidebar}

This section applies to a Neighborhood Conservation overlay district (NCO_{7.5}) where there are small two-story buildings built about 70 years ago. Council has given this neighborhood an overlay designation to which the standards of Section 6.610 apply. This neighborhood is threatened by teardowns that will replace the buildings with much larger buildings, displacing existing residents with moderate incomes. The purpose of these regulations is to allow redevelopment in the neighborhood while preserving scale and character, allowing existing residents to remain.

Section 6.610 Scale Regulation

This section applies to a NCO_{7.5} district where there are two-story homes built over 70 years ago that were built in a consistent style and scale, resulting in a desired community character. These homes use only a portion of the land within the setbacks and are at risk of being torn down and replaced with much larger homes that will be out of scale with the neighborhood. Obsolescence as well as the layout of rooms, room size, storage, kitchens, and baths mean buyers want more space and have the desire to remodel. The scale overlay standards are below and illustrated in Figure 6.610.

- A. Maximum Floor Area. The maximum floor area of any dwelling shall be 1,750 square feet without garage.
- B. Building Width. The maximum building width permitted in any addition is 30 feet.
- C. Front Yard. The front yard of 25 feet may be reduced to 22 feet for 60 percent existing front façade.
- D. Height. The maximum height permitted is 27 feet rather than 35 feet.
- E. Driveway. The existing driveway shall be retained with a maximum width of 10 feet to the rear of the dwelling unit.
- F. Garage. A garage is permitted with a maximum area of 460 square feet. It may be attached to the rear of the unit or it may be freestanding at the rear of the lot, with five-foot setbacks.

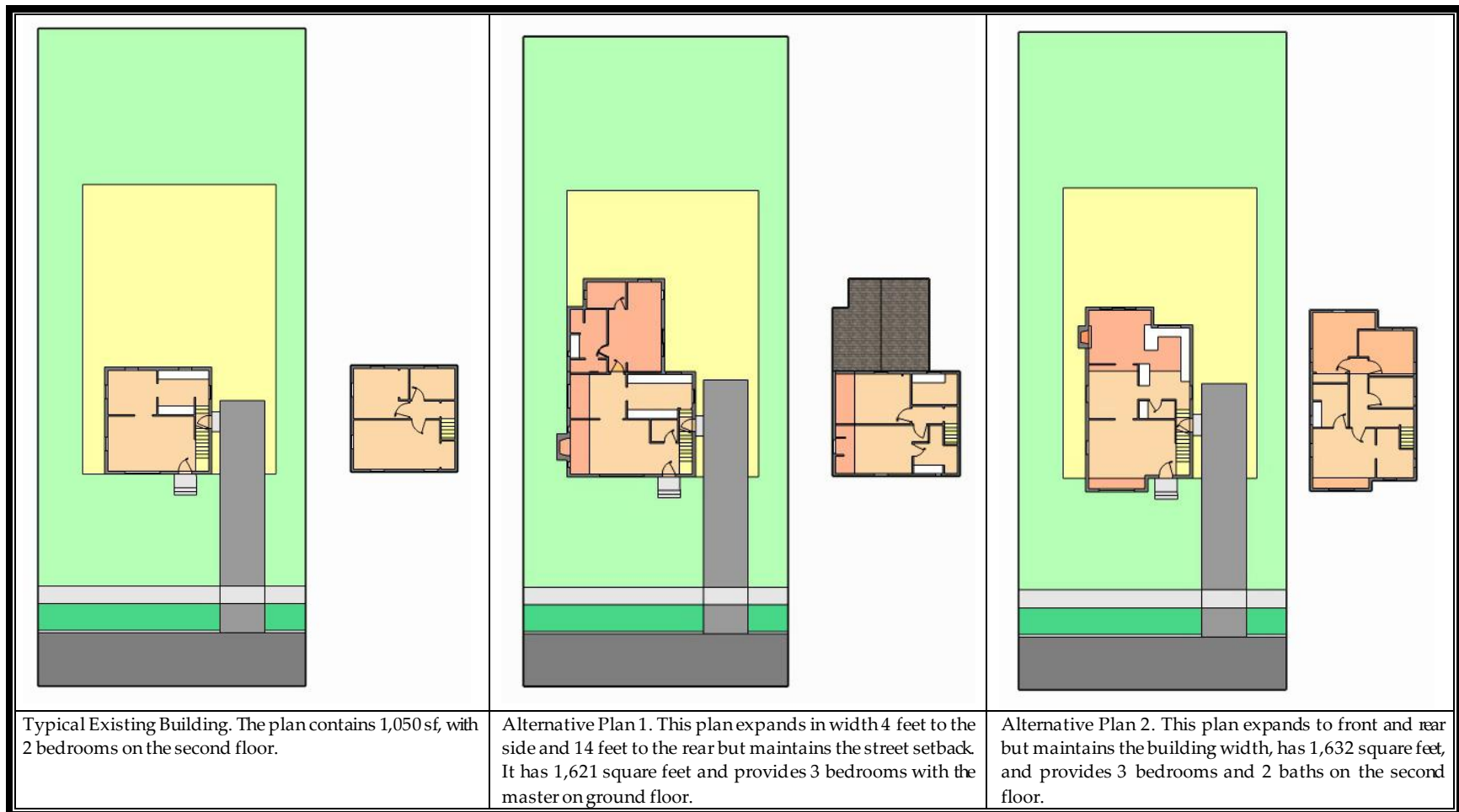


Figure 6.610 Expansion options

ARTICLE 7 NONCONFORMITY

DIVISION 7.100 PURPOSE

Section 7.100 Purpose

This ordinance creates standards for uses, lots, buildings, and signs. All new construction is required to meet these standards. There are many uses, lots, buildings, and signs that were built prior to the adoption of this ordinance which may not meet these standards. If legally built to previously existing standards, such uses, lots, buildings, or signs shall be classified as nonconforming. While a great deal of effort has gone into trying to limit the number of nonconforming situations, through limited use standards and Neighborhood Conservation (NC) districts, there will remain those that do not conform. The purpose of this article is to set rules governing nonconformities in accordance with the following general guidelines.

- A. Classification. Uses, lots, buildings, and signs shall be classified as critical, major, and minor, with the strictest regulation applying in the case of critical nonconforming uses.
- B. Make Conforming. The rules will provide a procedure for nonconforming uses to become conforming, while protecting neighbors.
- C. Regulations. In regard to rules for expansion, maintenance, and continuation, this division does not address nonconforming uses in the oceanic shoreline, where the existing nonconforming uses or buildings are within the 0.5 floodplain or have been flooded within the last 10 years.
- D. Elimination. Rules will provide for preventing uses that are so noxious or incompatible that they should be eliminated.
- E. Notice and Register. The rules will provide for recording all nonconforming uses.

DIVISION 7.200 NONCONFORMITIES

Section 7.201 Classification

All nonconforming uses, buildings, lots, and signs shall be classified as critical, flooding, major, or minor. The rules for each are different. The classifications are as follows.

- A. Critical. Critical nonconformities are obnoxious, have hazardous or toxic materials on-site, are greatly out of character, or a nuisance. They need to be discontinued. The following uses are deemed critical nonconforming uses.
 - 1. Heavy Industry. Active mining and concrete or asphalt batch plants in the CS, E, S, AU, U, UM, or U districts.
 - 2. Industry. Industrial uses that generate more than 100 trips per day, have access only to local residential streets, and are surrounded by residential uses in the E, S, AU, or U districts.
 - 3. Existing nonconforming uses or buildings that are within the 0.5 floodplain or have been flooded within the last 10 years.
 - 4. Lots that are below the current high-water mark or mean low tide.
- B. Major. These uses, buildings, and signs represent sufficient problems to require that action be taken to make them more compatible with their neighbors. It is recognized that such nonconformities are rarely

discontinued; as a result, improvement is a better approach. The following have been classified as major nonconforming uses, lots, buildings, and signs.

1. Industrial uses in residential areas, S, AU, or U districts that do not conform but have access to collector or arterial roads.
 2. Commercial uses in residential areas, S, AU, or U districts that do not conform but have access to collector or arterial roads.
 3. Nonconforming lots held in common with other lots.
 4. Lots where public sewer is not available and there is insufficient room for a mound septic system, or where separation for well and septic systems cannot be provided.
 5. Buildings that do not meet setbacks or intensity requirements.
 6. Signs that are more than 15 percent over maximum size or have nonconforming lighting.
- C. Minor. All other nonconforming uses, buildings, lots, or signs not specified in A, and B above.

Section 7.202 Nonconforming Uses

These are uses that are not permitted in the district where they are located. Uses listed as limited or conditional uses that have been approved under applicable requirements shall be considered conforming. The following rules apply to nonconforming uses, by classification.

- A. Critical. Critical nonconforming uses are to be discontinued and replaced with conforming use.
1. Within 180 days of notification that it is a critical nonconforming use, said use shall be discontinued and closed. The use's owner may request amortization if it does so within 60 days of notification.
 2. Buildings suffering structural or nonstructural damage of 30 percent or more shall be torn down. The amount of damage is calculated by the percentage of the building that is damaged.
 3. An environmental assessment shall be conducted on the property and the property owners shall be responsible for the cleanup of hazardous, toxic, or other types of waste, regardless of the future of the use.
 4. If a conforming use can be found to take over the property, this is desirable. If this has not occurred within two years, the building shall be demolished and the site restored.
- B. Major. Such uses may continue as nonconforming uses pursuant to this section, but owners are encouraged to apply for mitigation (Division 7.300) in order to become a conforming use, enabling the owners to reinvest in the property.
1. A use abandoned or discontinued for up to 12 months shall be replaced by a permitted or limited use. A use that proposes change or modifications to make it a minor nonconforming use shall be permitted and reclassified.
 2. A building with no structural damage and total damage of less than 50 percent may be permitted to rebuild, with no changes to the envelope, except in the oceanic shoreline (for which, see Section 5.404).
 3. Buildings suffering structural damage or total damage of 50 percent or more shall be torn down and replaced by a conforming use.
 4. Alteration or expansion of nonconforming buildings is permitted, subject to mitigation approval (Division 7.300). No expansion shall increase floor area by more than 10 percent, and any expansion shall remain within setback lines. No new building shall be created by the expansion.

- C. Minor. Such uses may continue as nonconforming uses pursuant to this section or may apply for mitigation (Division 7.300) to become a conforming use.
1. A use abandoned or discontinued for up to 24 months may be replaced by the same or another minor nonconforming use through mitigation approval. If abandoned or discontinued for more than 24 months, it shall be removed.
 2. A building suffering structural damage of no more than 25 percent or total damage of less than 60 percent may be permitted to be repaired, subject to mitigation approval.
 3. Buildings with greater damage than set forth in paragraph 2 above shall be torn down and replaced by a conforming use.
 4. Alteration or expansion of nonconforming uses is permitted subject to mitigation approval, provided the floor area is not increased by more than 15 percent and the expansion is within setback lines. No new lot or building may be created by the expansion.

Section 7.203 Nonconforming Lots

These are residential and nonresidential lots that fail to meet the minimum lot width or lot area requirements. For residential lots, every effort has been made to create NC districts that make all existing subdivisions conform to the regulations under which they were built. Random residential lots that are smaller than the district minimum may exist. This section governs them.

- A. Lots Held in Common. Where lots are held in common or where multiple members of the same family own the lots, they shall be required to be consolidated into conforming lots. Sales of contiguous nonconforming lots after the adoption of this code shall be prohibited and such action not be considered legally created.
- B. Lots Requiring On-Lot Sewer Systems. No building permits shall be issued for:
1. Lots with insufficient area to be able to provide a mound septic system or approved alternative on-site treatment system. OR
 2. Lots where adequate separation between well and waste water systems cannot be provided.
- C. Lots in Hazardous Environmental Areas. Lots with unstable soils or within the floodplain, wetland, or landslide-prone areas shall not be built upon unless a beneficial use permit is obtained (Sections 16.305–16.309).
- D. Residential. All residential lots, except those covered by paragraphs A, B, or C above, shall permit one building, provided all the other lot and bulk regulations can be met. This may be limited to one small-family unit (Section 4.302).
- E. Nonresidential. A nonconforming lot shall be buildable, provided the structure can meet the building code, include a minimum of 500 square feet of floor area, and meet setback standards, and required parking can be included in the plan.

Section 7.204 Nonconforming Buildings

Nonconforming buildings are those that do not meet setback, height, floor area, or building coverage requirements. The following exceptions are permitted.

- A. Height. Where the building height is no more than 5 percent higher than that permitted in the district, it shall be considered conforming.

- B. Yards. When street, side, or rear yards do not meet the minimums of the district, the use shall be deemed nonconforming, except as provided below.
 - 1. Buildings with setbacks no more than one foot less than that required shall be considered conforming.
 - 2. Where wooden buildings do not have fire-rated walls, the absolute minimum side yard or rear yard without an alley shall be five feet.
 - 3. Where the buildings on a block face are only partially conforming, an average shall be calculated and substituted for the district setback for any new construction or additions. Existing buildings that are no closer to the street than five feet shall be deemed conforming.
 - 4. On lots with one nonconforming yard, expansion is permitted, provided that no additional yard, floor area, or building coverage nonconformity is created.
- C. Floor Area Ratio. If the nonconformity is caused by a floor area ratio (FAR) that exceeds that permitted, the following exceptions may apply.
 - 1. Residential Buildings. These shall be considered conforming if all building setback standards are met and the FAR is not exceeded by more than 20 percent.
 - 2. Nonresidential Buildings. These shall be considered conforming when all setback, parking, and loading standards are met.
- D. Multiple Nonconforming Buildings. Where a block has more than 40 percent nonconforming buildings, the planning department shall, within 120 days, advertise a hearing to amend the zoning to create a new NC district to make the buildings conforming, or hold a single mitigation hearing (Division 7.300) in regard to the nonconforming buildings.
- E. Abandonment. A nonconforming building abandoned or discontinued for more than five years shall be considered a nuisance and the attorney notified to institute legal proceedings to have it removed.
- F. Damage. A nonconforming building may be rebuilt to its original foundations, except in the oceanic shoreline, provided the cost of reconstruction is less than 50 percent of its value and structural damage is less than 20 percent.

Section 7.205 Nonconforming Signs

{Note}

Warning: Many states have exempted off-site signs (billboards) from regulations such as those in this section.

{/Note}

Nonconforming signs shall be subject to the following standards.

- A. Minor Nonconformity. Signs that exceed the size standards by less than 6 percent but are conforming in all other aspects shall be considered conforming.
- B. All other nonconforming signs shall be subject to amortization (Section 7.403) or removal as indicated below.
 - 1. Movable and Window Signs. Movable signs shall be removed within 60 days of notification of nonconformity, and the total sign area shall be evaluated to determine if the sign area then meets A above.

2. Change of Name or Text. When the sign is to be changed to reflect ownership, use, or name change, it shall be replaced with a conforming sign.
 3. Development Signs. When the names of anchor stores displayed on development signs are changed, the entire sign shall be modified to become a conforming sign.
- C. Abandonment. Signs where the use or building is not occupied, the signs on the building shall be considered abandoned. The signs shall be removed as follows.
1. Vacant or Abandoned Uses or Buildings. Where a use has been vacant or abandoned for more than 12 months, the owner shall be given notice by the zoning officer to remove the sign within 30 days. If it is not removed within that time period, the city attorney shall be directed to have it removed.
 2. Billboards. When a billboard has no message for 12 months, it shall be considered abandoned. The owner shall be given notice by the zoning officer to remove the sign within 30 days. If it is not removed within that time period, the jurisdiction attorney shall be directed to have it removed. If the only message on the sign is to inform passersby that the sign is available for lease, after 16 months the procedure for removal in 1 above shall begin.

Section 7.206 Nonconforming Due to Flooding

Nonconforming buildings or lots within the 0.01 flood hazard area or buildings which have been flooded within the last 10 years shall be declared nonconforming. Ideally, such uses should be removed and the uses relocated because they will be flooded again and, as storms increase in intensity, will suffer worse damage. The following rules shall apply to such buildings.

- A. After Flooding. After flooding, a registered engineer shall determine the high-water elevation on the property by way of damage assessment or recorded water levels.
- B. Building Permits. A request for a building permit for work that shall cost in excess of \$10,000 shall trigger a review of the work and of standards that must be met in the work. Three factors govern the approval of a building permit.
 1. If the building has flooded in the last 10 years, full mitigation shall be required.
 2. Where the 0.01 storm flood elevation is less than six inches below the first floor level, all equipment shall be elevated to a point at least three feet above the 0.01 storm flood elevation for all spaces other than garages, screened patios, or porches.

DIVISION 7.300 MITIGATION

Section 7.301 Purpose

The purpose of this section is to further reduce the number of nonconformities. It provides for a process to mitigate a nonconformity through issuance of a conditional use permit which, when approved, makes the use conforming and eliminates problems in financing for the owners of the property. Sections 7.306–7.309 apply to the mitigation of buildings or lots that are nonconforming due to flooding.

Section 7.302 Mitigation

Landowners may apply for mitigation of a nonconformity through the provisions of this division. The application will go to the Zoning Board of Appeals (ZBA), following the procedures for conditional uses

(Section 16.402). The decision-making criteria of this division shall be used rather than those for conditional uses in Section 16.402. All nonconformities may apply for mitigation. Critical nonconformities shall have to do mitigation and agree to amortization to mitigate the economic impact of closure.

Section 7.303 Public Hearing

A public hearing pursuant to the conditional use standards shall be held. The property shall be posted as required, and all property owners within 800 feet shall receive individual notices. The applicant is encouraged to meet with neighbors prior to the public hearing to address any of their concerns about the use and propose mitigation of those concerns.

Section 7.304 Criteria for Approval

The criteria for approval of a mitigation request shall be those of this section, not those for conditional uses (Section 16.402). The purpose of the public hearing is to ascertain the following. First, it should determine the community's opinion of the use and whether it serves the neighborhood. Second, it should determine if the use can be made more compatible with the community by physical or operational changes. Third, it should determine whether removing nonconforming status will enable the owner to make improvements that will benefit the community. The following are elements that can be attached as conditions of the operation, maintenance, and appearance of the property.

- A. Current Conditions. The following factors shall be considered when determining the general compatibility of the use with the neighborhood.
 - 1. The degree to which neighborhood residents patronize or are employed on the site shall be considered.
 - 2. Management problems identified by neighbors, such as noise, parking issues, street activity, hours of operation, traffic, odors, lighting, or other concerns, shall be considered.
 - 3. Police, fire, or health department concerns shall be considered.
 - 4. Maintenance problems and/or financing problems associated with nonconforming designations shall be considered.
 - 5. Problems regarding the appearance of a building, its yard, or exterior storage shall be considered.
 - 6. The planning director shall identify any violations of pollution standards, including hazardous waste or other pollutants on the site.
- B. Landowner Desires. The landowner's desires for improving the use or maintaining it shall be considered.
- C. Potential Improvement. The ZBA shall identify elements that can improve the compatibility of the use and its ability to make such improvements if the use is made conforming.
 - 1. Appropriate changes to operational conditions, including hours of operation, lighting, entertainment, parking, or other factors shall be identified.
 - 2. Fire or health issues that must be corrected shall be identified.
 - 3. Improvement to the maintenance conditions of a building and adjoining public spaces shall be identified.
 - 4. Suitable improvements to bufferyards, landscaping, signage, or exterior storage shall be identified.
 - 5. Periodic renewal to determine if conditions are being followed shall be required.

6. Any violation of national, state, or local pollution standards shall be eliminated.
 7. It shall be determined whether the improvements will benefit the community by eliminating a deteriorating or unsightly condition that lowers adjoining property values.
- D. Decision. The ZBA shall determine whether the community will be better served by making the use conforming and allowing the landowner to make improvements than it would be by allowing the use to continue as nonconforming with the landowner unable to make investments. Conditions to make improvements or control operation may be required in granting mitigation.

Section 7.305 Effect

Upon approval, a mitigation permit for use or buildings shall be recorded and noted on zoning maps, except for the types of permits specified in Sections 7.306–7.309.

Section 7.306 Mitigation for Flooding

Mitigation for flooding includes elevation or removal. The applicant for a mitigation permit shall identify the flood elevations on the site within the past 10 years or submit a survey establishing the 0.01 storm flood elevation. The jurisdiction shall review records to determine if there is a history of street and building damage from less frequent storms. Such a history suggests removal is the preferred mitigation approach.

Section 7.307 Mitigation by Elevation

Mitigation by elevation is permitted for any structure where the maximum flood elevation in prior storms or the 0.01 storm flood elevation is less than six inches below the existing first floor of the structure. Permits may be issued requiring the building to be raised so the first floor is at least three feet above the 0.01 storm flood elevation, as adjusted for past flooding.

Section 7.308 Mitigation by Jurisdiction Action

The jurisdiction shall prepare plans for the relocation of units or other structural improvements such as levees and pumping stations in order to protect an area from flooding. Once such facilities are constructed, the 0.5 storm flood elevation should be revised to indicate that such areas are no longer subject to flooding. Any structure that has flooded in the past shall be removed from that category, as it is now considered to be protected from further flood damage.

Section 7.309 Mitigation by Removal

Where mitigation cannot be achieved by the means specified in Section 7.307 or 7.308, mitigation shall be achieved by removal. Only demolition permits shall be permitted for such properties. The jurisdiction shall work with insurers to provide relocation insurance as an add-on to any flood insurance issued to the properties. The jurisdiction may create a special taxing district to ensure that all properties are protected.

DIVISION 7.400 AMORTIZATION

{Sidebar}

This division is included as an option. Historically, while amortization is legal in some states, it has been very difficult to adopt and implement. The major problem is that the elected officials who pass the amortization ordinance are

unlikely to still be in office at the time the nonconformity must be removed. Political pressure on later officials can result in the program's failure.

{/Sidebar}

Section 7.401 Purpose

The purpose of this division is to provide a means to force uses to conform while providing sufficient time to allow the owner to recoup a portion of the investment and then eliminate the offending use. Two uses are subject to this: critical nonconformities and major nonconforming signs.

Section 7.402 Amortization of Uses

To amortize a use or sign, the jurisdiction shall complete the following requirements.

- A. Determination. The planning director shall certify to the jurisdiction and its attorney that amortization is an option for a specific property.
- B. Notification. The landowners shall be notified by registered mail that the adoption of this ordinance would make their property subject to amortization and a conference shall be scheduled to discuss the action. After the conference, the planning director shall schedule hearings.
- C. Length. The owner shall submit material on the cost of land and improvements, outstanding debt, current profit percentage, and other elements the owner feels to be important. This information shall be reviewed to determine the length of time that would be required to allow the investment to have provided the landowner a reasonable return. The zoning board shall hear any other testimony offered on these matters. Upon approval, a schedule of amortization shall be determined.
- D. After Adoption. The owner shall be notified by registered letter of the conditions for amortization and a certain date by which the use shall be terminated. A second notice shall be sent six months prior to the end of the amortization period.

Section 7.403 Amortization of Nonconforming Signs

Nonconforming signs shall be amortized and removed as set forth in this section.

- A. Notification. The zoning officer shall inventory signs and identify nonconforming signs. All landowners with a nonconforming sign shall be sent a notification of the nonconformity by registered mail. The notification shall indicate that the jurisdiction will provide assistance (B1 below) to the property owner before the end of the amortization period for nonconforming signs.
- B. Nonconforming on-site signs shall be amortized over a period of five years.
 1. Six months before the removal date, all landowners shall receive a second notice informing them that the jurisdiction will provide jurisdiction equipment and personnel to assist those seeking to remove the nonconforming signs. The old signs will be picked up and taken to a landfill or recycling center.
 2. Three weeks before the removal date, the jurisdiction shall send a more detailed notice of equipment to be available and instructions for a three-day removal date.
 3. The jurisdiction will pay for the city equipment, workers on jurisdiction vehicles, and tipping fees for the cost of removal.
- C. Off-Site Signs. The amortization period for off-site signs shall be from five years to 20 years from the date of construction. The sign owner shall submit an analysis proposing the length of time required to

allow the owner a reasonable return on the investment and the cost of removing the sign and restoring the site. The zoning board shall hear any other testimony offered on these matters. Upon approval, a schedule of amortization shall be determined.

- D. After Adoption. The jurisdiction shall notify the owner by registered letter that the use must be terminated by a certain date. A second notice shall be sent six months prior to the end of the amortization period.

ARTICLE 8 LANDSCAPING

DIVISION 8.100 INTRODUCTION

Section 8.101 Purpose

There are several purposes for the landscaping provisions of this article.

- A. Environment. Landscaping has numerous environmental benefits. It reduces heat island and air conditioning loads in summer. In the winter, it reduces wind velocities to make heating more effective. Landscaping in streets and yards reduces storm water flows and enhances the recharge of aquifers. Vegetation removes carbon and adds oxygen to the atmosphere.
- B. Aesthetics. The planting of trees and other vegetation enhances the quality of the environment and can add substantial visual pleasure. Trees add to the quality of all community character types and are essential to the character of Suburban (S) and Estate (E) districts.
- C. Nuisance Mitigation. When planted as a barrier, as in bufferyards, landscaping mitigates against nuisances by hiding or screening less attractive uses. The vegetation and structures in bufferyards provide mitigation of noise, dust, trash, and light.
- D. Value. Trees add value to properties and the community and reduce the costs of flood control.

Section 8.102 Plant Unit

Planting requirements are listed in plant units. A plant unit is defined as an area of 1,742 square feet or 41.7 feet on a side containing a mix of canopy tree types (deciduous and conifers), understory, and shrubs that are intended to produce an opaque vegetative mass or volume from ground to canopy top. A planting of 25 plant units per acre would produce a woodland.


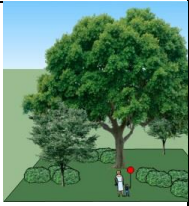
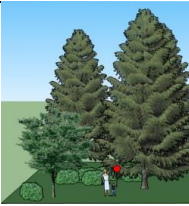

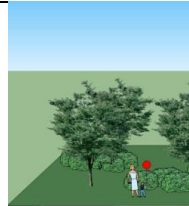
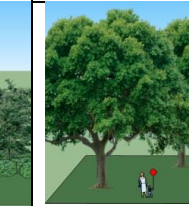
Section 8.103 Plant Unit Options

Table 8.103 defines six different plant units (I–VI) utilizing four types of plant material: canopy deciduous, canopy conifer, understory, and shrubs. With two exceptions, the plant units are selected to provide similar screening value from ground to canopy tops. Option V is intended for landscaping under power lines, and VI is intended for use when landscaping parking areas in order to provide safe views of moving vehicles. The developer is free to choose options I–IV, but the planning commission may require specific options in some bufferyard areas in order to achieve maximum protection. Table 8.103 provides a listing of the options.

- A. Plant Type and Number. The table provides the required plant material types and number of plants for each option and an illustration of the plant unit on 1,742 square feet.
- B. Purpose. The purpose of each plant unit is presented.
- C. Alternative Plants. Although the options are for use throughout the country, some southern areas have palm trees that can be used for general landscaping but not for bufferyards because they have a very narrow profile. Bamboo is also available in some areas and can be treated as a hedge or wall. Arid areas need individualized plant lists using plants that survive without irrigation (Section 8.206)
- D. Plant Material Size. The size of each of the four plant types is presented. Shrubs are listed as three feet in height and should be planted in bufferyards and common open spaces at this size. For on-lot

landscaping, the developer may substitute evergreen shrubs that spread horizontally and will be lower for design purposes.

- E. Existing Plant Material. Existing plants in good health that are left undisturbed shall be counted toward the required plant material.

Table 8.103 Plant Unit Options					
Plant Unit I	Plant Unit II	Plant Unit III	Plant Unit IV	Plant Unit V	Plant Unit VI
Plant Types and Number					
Canopy Deciduous 1 Canopy Conifer 1 Understory 1 Shrubs 10	Canopy Deciduous 1 Understory 2 Shrubs 12	Canopy Conifer 3 Understory 1 Shrubs 7	Canopy Conifer 4 Shrubs 6	Understory 4 Shrubs 11	Canopy Deciduous 3
					
Purpose					
This is the standard option and contains all four types of plant material.	This option contains no conifers and is suitable where more flowering trees are desired or where conifers do not do well.	All canopy-level trees are conifers to provide a denser year-round screen.	This option eliminates understory and uses all conifers and shrubs. Some caution is needed as conifers may thin out at lower levels as they mature.	This has no canopy-level trees and is intended for areas with above-ground utilities where a low-level buffer is needed.	This option uses three deciduous canopy trees and is best suited for parking lot bufferyards or where used with a wall.
In some areas of the country, palms may be introduced, but they typically require more plant material as most palms have little opacity. The buffer model can be used to develop alternatives. Bamboo can be used and is treated as a hedge.					
Plant Material Sizes					
Canopy Deciduous: 3-inch Caliper	Canopy Conifer: 8 feet	Understory: 1.5-inch Caliper	Shrubs: 3 feet		

Section 8.201 Purpose

The purpose of this division is to set forth planting requirements for lots, common open space, parking lots, and streets. Requirements for parking lots and common open space vary by district. Lot landscaping is a function of the area of the lot. Street-tree landscaping varies from commercial areas with sidewalks to pervious parkways or roads with ditches or curbs. In arid regions, different sets of plant materials are needed.

Section 8.202 Residential Lot Landscaping

The landscaping varies with the size of the lot and housing type as shown in Table 8.202.

Table 8.202 Residential Lot Landscaping		
Lot Area	Square Feet (sf) per Plant Unit	Canopy Coverage (%)
Single-Family and Twin		
4,000–9,999 sf	2,300	76
10,000–24,999 sf	2,500	70
25,000–45,000 sf	2,800	62
Greater than 45,000 sf	3,200	54
Attached Single-Family		
Atrium	3,500	50
All Other	2,800	62
Multifamily		
U, UM, UC Districts	4,700	37
S, E Districts	3,600	48
CS, AG, N Districts	3,200	54

Section 8.203 Nonresidential Lot Landscaping

Nonresidential lots shall be landscaped based on the zoning district, as shown in Table 8.203.

Table 8.203 Nonresidential Lot Landscaping		
Lot Area	Square Feet (sf) per Plant Unit	Canopy Coverage (%)
Nonresidential		
U, UM, UC Districts	5,000	35
U, UM, UC Districts with paved pedestrian precinct	7,000	25
S District	2,500	70
E, CS, AG Districts	2,800	62
N District	2,300	76
BP District	5,000	35
I District	7,000	25
HI District	8,500	20

Section 8.204 Special Lot Landscaping

With minimum lot widths less than 70 feet where the garage is reached from the street, additional landscaping is required.

- A. Front-Load Garage. A hedge shall be provided in the side yard closest to the drive from the garage to within six feet of the sidewalk. It shall be maintained at a height of three to five feet.
- B. Modulation. On these smaller lots, front-load garages represent a design problem that A above does not adequately address, and the planning director may use modulations to mitigate the problem with side-load front garage, rear garages, and setback garages (Sections 10.205–10.207).

Section 8.205 Parking Lot, Open Space, and Street Landscaping

Landscaping for parking lots, open space, and street trees is required as shown in Table 8.205, except as indicated in A through D below.

Table 8.205 Landscaping for Parking Lots, Open Space, and Streets			
Zoning District	Requirement for 1 Plant Unit of Landscaping		
	Number of Parking Spaces	Open Space (sf) of Pervious Area	Street Trees 1 per X linear feet
Urban Core (UC)	16	4,300	See Section 8.210
Urban Mid-Rise (UM)	16	4,300	See Section 8.210
Urban (U)	14	4,300	See Section 8.210
Auto-Urban (AU) ¹	12	4,000	50
Suburban (S)	12	3,200	33
Estate (E)	8	2,850	See Section 8.207
Countryside (CS)	10	See Section 8.209	100
Natural (N)	8	See Section 8.209	150
Agricultural (AG)	10	3,200 ²	150
Business Park (BP)	12	4,300	50
Industrial (I)	14	6,400	150
Heavy Industry (HI)	20	8,500	100 ³
¹ See Section 8.207 for additional options.			
² For open space that is not devoted to agricultural use			
³ This standard is for exterior streets. Interior streets need 1 tree per 200 sf.			

- A. Recreation areas. Where a portion of the open space is designated in the site plan for recreational uses, the following conditions shall apply.
 - 1. Active recreation areas such as ball fields where no trees are permitted shall be designated on the plan and those areas shall not be used in determining plant units. This shall include an area of 20 feet around fields.
 - 2. Any seating or attached service areas for recreation and an area of 25 feet around these shall be landscaped with one plant unit per 6,000 square feet of pervious area.
 - 3. Passive recreation areas such as picnic areas, fitness trails, casual seating and tot lots shall be landscaped with one plant unit for every 8,000 square feet of pervious area.

- B. Wetlands. New or restored wetlands shall be planted with wetland plants as required by the urban forester in order to establish wetland cover or replace invasive vegetation to enhance the quality of the wetland.
- C. Detention. Plant units in detention or retention facilities are not required but if requested by the developer the plantings shall be approved by the urban forester.
- D. Beaches. These areas shall be excluded from plant unit landscaping requirements but may be subject to plantings for erosion prevention or dune protection.

Section 8.206 Arid Region Landscaping

{Sidebar}

This section is intended to provide guidance for arid regions where irrigated landscapes are unsustainable. These areas range from desert to short-grass prairie environments with a wide range of vegetative types. The local jurisdiction will have to determine there are types of plants that can be used in the plant unit system that will work in the local conditions without irrigation. This section provides for the use of xeric vegetation instead of the plant unit.

{/Sidebar}

In arid regions, irrigation of landscaping is unsustainable and requirements in the prior sections shall not apply. The following performance criteria shall apply.

- A. Plant Units. The plant unit types in Section 8.103 should not be used and the urban forester shall develop the following information.
 - 1. Provide a list of species of canopy trees, understory, or shrubs that can tolerate drought periods of 10 years without irrigation.
 - 2. Identify a mix of alternative plants that provide coverage for the area of a plant unit (Section 8.102).
 - 3. Provide a listing of plants for shade or design purposes in yards, or plants and vines, used to soften the appearance of walls in bufferyards.
- B. Ground Cover. Xeric ground covers that can survive without irrigation in the climate shall be identified by the urban forester. The degree of human activity this ground cover can sustain shall also be identified. Where there is more intense human activity, the following may be used as ground cover: rock, stone, gravel, artificial turf, wood chips, bark, and recycled or other artificial materials that prevent wind erosion and tolerate traffic.
- C. Irrigation. Irrigation is prohibited, except lots may have an area of 1,000 square feet or 15 percent of the lot's pervious area, whichever is less, drip irrigated to support landscaping as an entrance, patio, or other feature.
- D. On-site Storage. The irrigation in C above may be increased where water is captured from the roof or other impervious surfaces and stored in a rain barrel or cistern. The engineer shall determine the additional area that may be irrigated by the storage according to its proposed capacity and the ability of the catchment area to fill the storage, based on 40 percent of average annual precipitation.
- E. Permitted Grey Water Irrigation. Where the jurisdiction provides grey water, a plan for allocation of grey water for irrigation to streets or selected land use area shall be developed indicating where it may

be used. For individual uses where a separate grey water system and storage is approved, it may be used on-site for irrigation.

- F. Parking Lot Landscaping. Shade shelters in parking lots are encouraged to reduce heat island buildup. The planning director shall require that they be used for solar power. Vegetation should be used to achieve shade where appropriate material that survives without irrigation is available.
- G. Street Trees. Where trees are available that survive without irrigation, they shall be used. Where they require irrigation, they are to be permitted only on streets designated by the jurisdiction to have irrigated street trees. They shall be drip irrigated and be in accordance with the jurisdiction's water conservation plans.
- H. Open Spaces. Except for active recreation such as ball fields, open space shall be left in natural vegetation. Wherever feasible, artificial turf or the ground covers specified in B above shall be used.

Section 8.207 Auto-Urban Landscaping

Auto-urban landscaping is designed to screen the large parking areas that create this character type. There are several design forms intended to create more urban feel despite the area consumed by parking. One of the following landscape modifications shall be used rather than the requirements of Table 8.205.

- A. Interior Parking Lots. Where blocks are designed with on-street parking and zero building setbacks with the interior of the block being used as a parking lot, the area shall be landscaped as follows: one plant unit for every 10 parking spaces and an eight-foot planting strip between buildings and the parking lot, with one plant unit per 100 lineal feet.
- B. Off-Site Parking Lot. Where a block or noncontiguous surface parking lot is used for required parking for a development, the following standards shall apply.
 - 1. An eight-foot sidewalk shall be on the street's curb, and a planting area including the street parkway shall be 20 feet wide and have 1.5 plant units per 100 feet of length. One eight-foot bench shall be provided in this area for every 200 lineal feet of street frontage.
 - 2. The parking lot interior landscape islands shall have one plant unit for every 18 spaces.
- C. Loggia. A loggia that separates the parking lot from the street may be substituted for a bufferyard for the street. See Section 11.308 for design elements.

Section 8.208 Estate Street-Tree Landscaping

In the Estate (E) district, street trees are intended to provide on-lot privacy and screen buildings from view. A hedgerow-type planting of one plant unit of types I–IV (Table 8.103), shall be planted every 60 feet. Where ditches are used for drainage, the trees shall be planted on the outer edge of the right-of-way, at least one foot above the bottom of the ditch, and may extend into the first 10 feet of the lot.

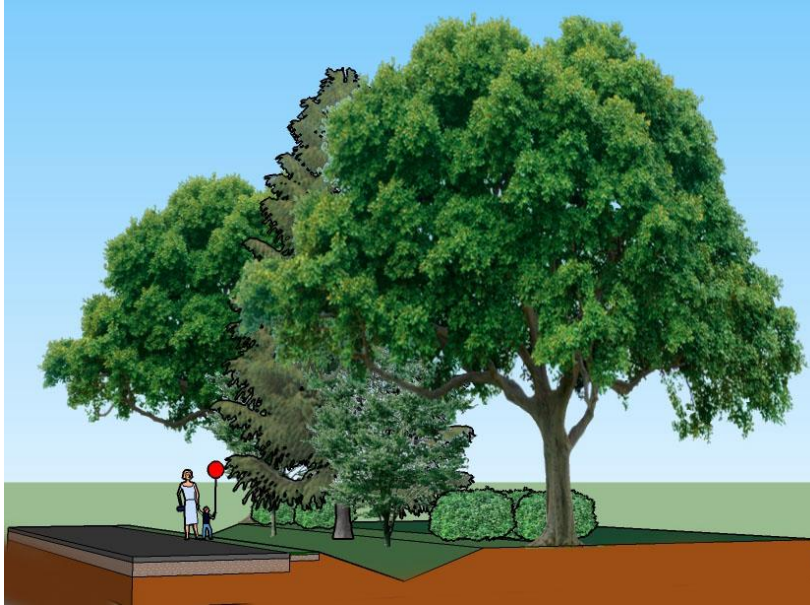


Figure 8.208 Estate street trees form a hedgerow

Section 8.209 Rural Open Space

In the Countryside (CS) and Natural (N) districts, open space should be left in an intact natural condition as forest, savannah, grassland, wetland, desert, etc. Land that is old field at the time of development shall be reviewed by the urban forester to identify where invasive plants are to be removed and native plants for restoration are to be installed. In the Agriculture (AG) district, an area used for agriculture may remain as pasture or tilled land. The following are the planting requirements to create a land cover type.

- A. Forest. Ten plant units shall be required per acre. Two of the plant units shall have canopy trees of minimum four-inch caliper or 12 feet high for evergreen canopy. These species shall be selected for their early ability to produce seedlings. In addition, the following conditions apply.
 - 1. Where the land is in agricultural use, the entire area shall be plowed and planted with a grassland cover before planting the trees.
 - 2. Where restoring old field, invasive plant species shall be killed, and, in some cases, grasslands planted. The urban forester may reduce the required area to be planted by the area where woody plants have reached canopy heights of eight feet over at least 8 percent of the site.
- B. Savannah. Savannah shall be plowed and reseeded as in A above. Three plant units of type VI (Table 8.103) of the local savannah species shall be planted per acre.
- C. Grasslands or Prairie. These shall be maintained as grasslands. Seed mixes for restoration shall be woodland grasses, tall grass, or short-grass types based on a local grassland species. The following apply to other conditions if they exist on-site.
 - 1. Old fields with extensive woody plants shall be plowed and seeded as grassland.

2. Where grazed, the arborist shall evaluate the area for the presence of noxious plants, invasive species, or woody vegetation that is to be removed. Such areas shall be plowed and seeded. For some species, planting of potted plants may be required to restore a balanced plant mix.
- D. Wetlands. These areas need to be planted only if long use has eliminated or damaged the seed stock. A wetland specialist shall evaluate the wetland and identify invasive plants to be eliminated and areas in need of restoration or species to be introduced to improve quality.
- E. Desert. These areas shall be cleared of invasive plant species. Where grazed, the urban forester shall evaluate the area for the presence of noxious plants, invasive vegetation, or species that lower ground water availability and they shall be eliminated. Seeding or planting potted plants may be required to restore a balanced desert condition.
- F. Maintenance. All plantings shall be maintained to eliminate invasive plant species and a maintenance plan (Division 8.400) shall be required. Where grasslands are to be maintained, mowing, burning, or herbicides shall be required to prevent woody plants from becoming established.

Section 8.210 Center Parkways

Where streets have center parkways, the parkways shall be landscaped based on the following widths.

- A. 4 to 6 feet. One plant unit per 150 linear feet.
- B. 7 to 12 feet. One plant unit per 100 linear feet.
- C. 13 to 18 feet. 1.5 plant units per 100 linear feet.
- D. 19 to 30 feet. Two plant units per 100 linear feet.
- E. Over 30 feet. These shall be matched to local adjacent natural habitats or planted as indicated in Section 8.207.

Section 8.211 Urban Street-Tree Planting

In urban districts where it is unlikely that there is a parkway grass strip for planting because the sidewalks go from street to building, there shall be street-tree planters as indicated in Figure 8.211. Adequate water for the trees shall be provided.

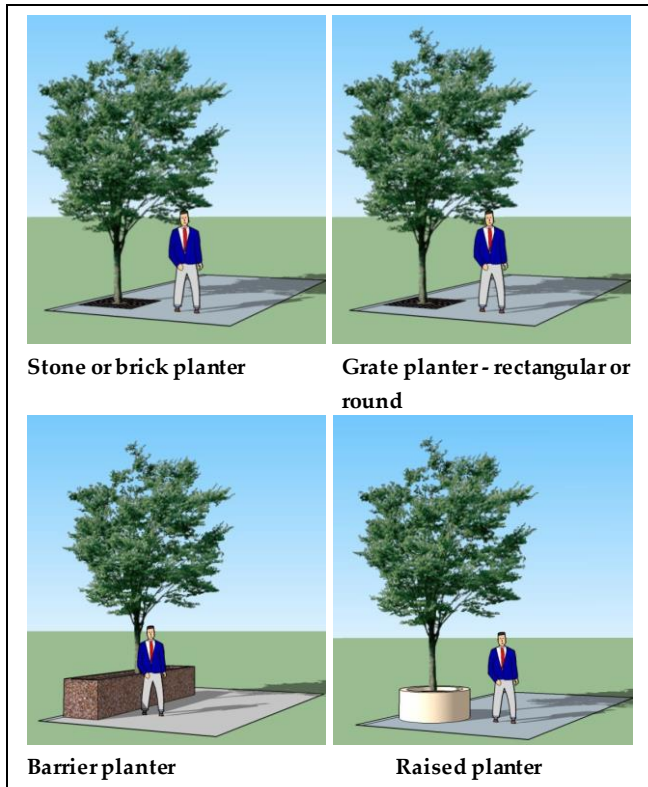


Figure 8.211 Sidewalk planters

Section 8.212 Urban Streetscape

Where sidewalks are a minimum of 12 feet in width, streetscape elements consisting of benches, decorative planters for flowers or small shrubs, street art, or other pedestrian-oriented features shall be provided. A minimum streetscape shall measure two-tenths of the façade's length or three square feet, whichever is less, for every lot or storefront. Restaurants with seating on the sidewalk are exempt from this provision. Planters shall be watered by the property owner.

Section 8.213 Clear Sight Triangle

A clear sight triangle (Figure 8.213) shall be provided at all intersections. Table 8.213 below indicates the dimensions required, based on the speed limit of the intersecting road. On controlled roads, the distance shall be measured from 15 feet behind the curb line or five feet behind the stop line, whichever is greater. The distance is measured to the lane of oncoming traffic along the hypotenuse. On uncontrolled intersections, the distance from the intersection shall be measured from five feet behind the stop line. In both cases, the distance is determined by the speed of the road with higher traffic volumes. Trees or shrubs shall not be planted in the clear sight triangle. Bufferyards shall be moved outside the triangle.

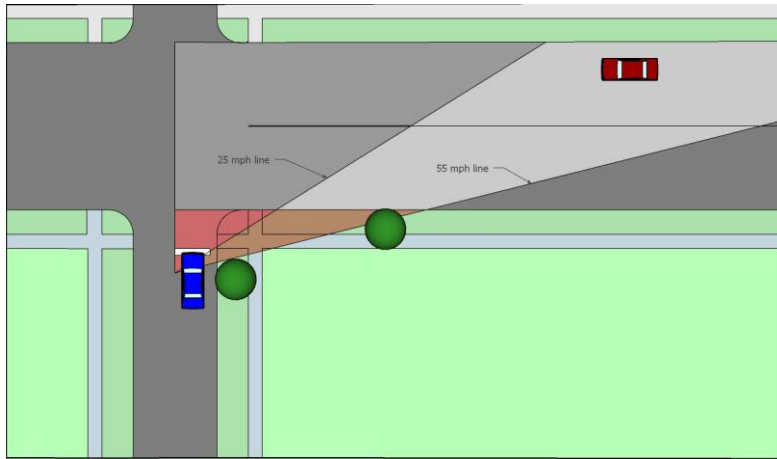


Figure 8.213 Clear sight triangle - controlled intersection, illustrated for 25 and 55 mph

Table 8.213 Clear Sight Triangle			
Speed on Major Road (mph)	Controlled Intersection Distance (ft)	Uncontrolled	
		Distance for Major Road (ft)	Distance for Minor Road (ft)
25	29	25	115
30	35	31	140
35	42	36	165
40	49	43	195
45	55	48	220
50	62	54	245
55 or more	72	62	285

Section 8.214 Hedges

Where hedges are required anywhere in this article or in Article 2, the shrubs shall be planted in a line at three feet on center and maintained to the specified height or three feet, whichever is greater.

Section 8.215 Alternate Vegetation Types

There are several plant types that grow in limited areas and are used because of their exceptional density or decorative purposes. The following conditions control their use.

- A. Bamboo. Bamboo grows in clumps and is a very effective visual barrier that resists penetration on foot. It may be used in bufferyards as a substitute for a wall or fence. Since bamboo is evergreen and some can reach a height greater than 20 feet, the bufferyard model in Section 8.307 shall be used to modify the plant units based. Bamboo shall be treated as a fence with the height being the mature height of the species being used. Species that spread aggressively must have root containment barriers installed to prevent migration out of the bufferyard or damage to adjoining plantings.
- B. Palm Trees. These are generally poor buffer material because of their limited opacity and shall not be used as bufferyard plantings. For other applications, the following conditions shall control use.

1. Tall palms, like royal palms, used for street trees may be used as plant unit VI with four palms per plant unit. Other species shall not be used as street trees.
2. Where used for on-lot landscaping, the plant unit with palms shall be approved as canopy trees or understory by the urban forester based on the mature height of the palms selected.
3. Open-space use of palms shall be limited to aesthetic uses where they are used along drives or structures for aesthetic value. Species over 30 feet high shall be counted as canopy trees. Shorter species shall be counted as understory in plant units.

DIVISION 8.300 BUFFERYARDS

Section 8.301 Purpose

This division deals with bufferyards designed to mitigate nuisances that are associated with uses. Bufferyards provide visual screening and reduce specific nuisances like noise or blowing debris. Bufferyards are specified in terms of opacity, meaning the degree to which a building or use 30 feet high is screened from view. The opacity of plants reflects the size of canopy trees eight to 10 years after planting. An opacity of 0.2 screens 20 percent of a building while an opacity of 1.0 screens 100 percent. (See Figures 8.301A and B.) Opacities greater than 1.0 contain more plant material, structures, or width than needed to achieve 100 percent opacity and are used because they are intended to provide greater screening of noise or other nonvisual use nuisances.

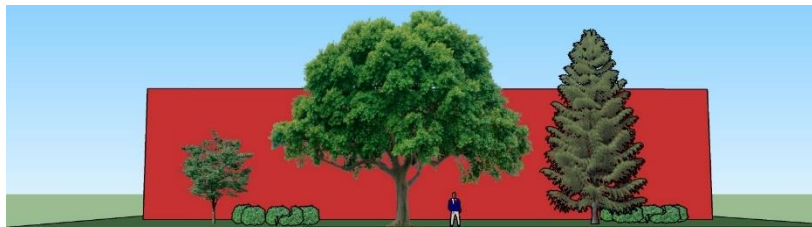


Figure 8.301A Bufferyard with 0.2 opacity



Figure 8.301B Bufferyard with 1.0 opacity

Section 8.302 Bufferyards Required

Bufferyards are required between zoning districts as indicated in Tables 8.303A–D or for specific uses (Divisions 2.300 or 2.400). Bufferyards are also required along streets and railroads as specified in Section 8.304. Parking lots adjoining residential, outdoor storage, truck loading areas, and garbage facilities have specific buffer requirements.

Section 8.303 District Bufferyards

Bufferyard requirements are presented in table form. The districts are shown in the table both vertically (district of proposed use) and horizontally (adjoining district or street type). The bufferyard required is represented in the cell at the intersection of the district in which new development is proposed and the adjoining district. The table indicates the opacity required. A cell in the table looks like the following: “1.0/0.2” (which is for Mining (M) adjoining Estate (E) residential districts in Table 8.303A). Added together, they provide a 1.2 total opacity bufferyard. In a developing area, the first use provides part of the bufferyard and the future developer of the vacant adjoining parcel provides the rest. “1.0/0.2” indicates the mining use provides a 1.0 opacity bufferyard and the estate residential use provides a 0.2 opacity buffer. Where a use is built next to an existing use that did not provide a bufferyard, the new use is responsible for the entire bufferyard. Thus, mining would provide the entire 1.2 opacity bufferyard.

- A. Between Districts. Table 8.303 is in three parts. Part A covers rural or county areas. Part B covers suburban and urban development. Part C covers built-up or mature communities. In mature or urban areas there is little contiguous vacant or redevelopable land, so most development will abut existing development with no buffers in place. The sites are generally small, so opacities will be lower, and buffers will emphasize walls and fences.
- B. Arid Area Bufferyards. The vegetation required for effective screening cannot sustainably be provided in these areas, so buffering relies more on structural methods. Table 8.303D contains standards for these bufferyards.
- C. Bufferyards within Districts. Tables 8.303A–D do not provide a bufferyard between developments in the same district. Section 8.305 specifies the bufferyards required to protect residential developments within a district from adjoining parking, loading, and garbage areas.

Table 8.303A Rural Bufferyards					
Zoning of Proposed Development	Zoning of Adjoining Property				
	AG, N	CS	E	NC	M or I
Agriculture (AG), Natural (N)	0 / 0	0 / 0	0 / 0.3	0.2 / 0	0 / 0.8
Countryside (CS)	0* / 0	0* / 0	0 / 0.3	0.2 / 0	0 / 0.8
Estate (E)	0.3 / 0	0.3 / 0	0 / 0	0.3 / 0	0.2 / 1.0
Neighborhood Conservation (NC)	0 / 0.2	0 / 0.2	0 / 0.3	0 / 0	0 / 1.2
Mining (M) or Industry (I)	0.8 / 0	0.8 / 0	1.0 / 0.2	1.2 / 0	0 / 0
*A buffer of .3 is required where the permitted cluster abuts other land in these districts. The buffer can be reduced to 0.2 on each property when clusters abut.					

Table 8.303B Sub-Urban or Urban Bufferyards									
Zoning of Proposed Development	Zoning of Adjoining Property								
	AG, N	CS	E	S	NC	AU	U	BP	I
Agriculture (AG), Natural (N)	0 / 0	0 / 0*	0 / 0.2	0 / 0.3	0 / 0	0 / 0.4	0 / 0.4	0 / 0.3	0 / 0.4
Countryside (CS)	0* / 0	0* / 0	0 / 0.2	0 / 0.3	0 / 0	0 / 0.4	0 / 0.4	0 / 0.3	0 / 0.6
Estate (E)	0.2 / 0	0.2 / 0	0 / 0	0.1 / 0.2	0.2 / 0	0.1 / 0.5	0.1 / 0.5	0.1 / 0.4	0.2 / 0.8
Sub-Urban (S)	0.3 / 0	0.3 / 0	0.2 / 0.1	0 / 0	0.3 / 0	0.1 / 0.4	0.1 / 0.4	0.1 / 0.3	0.2 / 0.8
Neighborhood Conservation (NC)	0 / 0	0 / 0	0 / 0.2	0 / 0.3	0 / 0	0 / 0.4	0 / 0.4	0 / 0.4	0 / 1.0
Auto-Urban (AU)	0.4 / 0	0.4 / 0	0.5 / 1	0.4 / 0.1	0.5 / 0	0 / 0	0.1 / 0.1	0.1 / 0.1	0.1 / 0.3
Urban (U)	0.4 / 0	0.4 / 0	0.5 / 0.1	0.4 / 0.1	0.5 / 0	0.1 / 0.1	0 / 0	0.1 / 0.1	0.1 / 0.3
Business Park (BP)	0.3 / 0	0.3 / 0	0.4 / 0.1	0.3 / 0.1	0.4 / 0	0.1 / 0.1	0.1 / 0.1	0 / 0	0.1 / 0.2
Industry (I)	0.4 / 0	0.6 / 0	0.8 / 0.2	0.8 / 0.2	1.0 / 0	0.3 / 0.1	0.3 / 0.1	0.2 / 0.1	0 / 0
*A buffer of 0.3 is required where the permitted cluster abuts the district boundary. The buffer can be waived when clusters abut.									

Table 8.303C Urban or Mature Community Bufferyards							
Zoning of Proposed Development	Zoning of Adjoining Property						
	S	AU	U, UM, UC	NC	BP	I	HI
Sub-Urban (S)	0 / 0	0.1 / 0.3	0.1 / 0.4	0.2 / 0	0.1 / 0.4	0.2 / 0.6	0.02 / 1.0
Auto-Urban (AU)	0.3 / 0.1	0 / 0	0.1 / 0.1	0.3 / 0	0 / 0	0.1 / 0.5	0.2 / 0.6
Urban (U), Urban Mid-Rise (UM), Urban Core (UC)	0.4 / 0.1	0.1 / 0.1	0 / 0	0.4 / 0	0 / 0	0.1 / 0.4	0.2 / 0.5
Neighborhood Conservation (NC)	0 / 0.2	0 / 0.3	0 / 0.4	0 / 0	0 / 0.5	0 / 0.8	0 / 1.2
Business Park (BP)	0.4 / 0.1	0 / 0	0 / 0	0.5 / 0	0 / 0	0 / 0.2	0.1 / 0.3
Industry (I)	0.6 / 0.2	0.5 / 0.1	0.4 / 0.1	0.8 / 0	0.2 / 0	0 / 0	0 / 0.2
Heavy Industry (HI)	1.0 / 0.2	0.6 / 0.2	0.5 / 0.2	1.2 / 0	0.3 / 0.1	0.2 / 0	0 / 0

Table 8.303D Arid Area Bufferyard					
Zoning of Proposed Development	Zoning of Adjoining Property				
	N, AG, S	E	S	AU, U, UM, UC	I, HI, UC
Rural (N), (AG), (CS)	0 / 0	0 / 0.1	0 / 0.2	0 / 0.3	0 / 0.2
Estate (E)	0.1 / 0	0 / 0	0 / 0.3	0 / 0.5	0 / 0.6
Sub-Urban (S)	0.2 / 0	0.3 / 0	0 / 0	0 / 0.4	0 / 0.6
Urban (AU), (U), (UM), (UC)	0.2 / 0	0.5 / 0	0.4 / 0	0 / 0	0 / 0.5
Industrial (I), (HI), (M)	0.2 / 0	0.6 / 0	0.6 / 0	0.5 / 0	0 / 0

Section 8.304 Street and Railroad Bufferyards

Street bufferyards on arterials and collectors are intended to buffer uses from road noise or screen uses from view. On local roads, they are intended to buffer residential uses from nonresidential uses in the same district. This requirement applies in the E, S, and AU districts. Nonresidential uses in other districts on local roads also need bufferyards as per Sections 8.303A–D. Railroad bufferyards apply to residential use abutting railroad tracks. The opacity of the required bufferyard is specified in Table 8.304.

Table 8.304 Street and Railroad Bufferyards					
District	Arterial	Collector	Local*		Railroad
			Residential	Nonresidential	
Estate, All	0.5	0.3	0	0.4	0.8
Suburban, All	0.4	0.2	0	0.4	0.8
Auto-Urban	0.4	0.2	0	0.3	0.8
Business Park	0.2	0.2	Na	Na	0.3
Industry	0.4	0.4	Na	Na	0
Heavy Industry	0.8	0.8	Na	Na	0
*For local road in a district. Where a road is the district boundary, Tables 8.303A–D control.					

Section 8.305 Bufferyards within a District

In Table 8.303, no bufferyards are required when both properties are in the same district. However, where a parking lot, loading area, or trash dumpsters exist on property boundaries, buffering is required. Parking bufferyards are shown at the bottom of Tables 8.307, 8.308, and 8.310. Loading areas for trucks and garbage shall install a 1.0 opacity buffer or cover the loading and garbage areas as shown in Figure 8.305 and provide a 0.1 opacity buffer on the property line. Containers for trash dumpsters shall be screened with an enclosing wall at least two feet higher than the dumpster to prevent trash from blowing around. The enclosure shall be visually screened from neighboring land uses with a hedge to be maintained at six or more feet in height.



Figure 8.305 Truck loading and garbage area enclosed by roof and wall

Section 8.306 Rural Street Bufferyards

In the CS, AG, and N districts, bufferyards are required to screen development from roads so that development is invisible or appears as a background element in the landscape. Similar bufferyards are also required where cluster developments adjoin. The bufferyard required varies with the environment as indicated below.

- A. Woodlands and Savannah. The bufferyard is created by preserving 150 feet of woodland or 250 feet of savannah between roads and development. Two cluster developments not separated by a road shall have minimum setbacks from the property line of 50 and 100 feet, respectively preserved in natural condition. The planning director may require a connecting road for connectivity and fire and emergency access.
- B. Open Environments. In farmland, old fields, grassland, or desert, bufferyards may be required. A sense of infinite space, where there are clear views to horizon or buildings are in the background, is created by siting of either the cluster or bufferyards. The following standards control where bufferyards are required.
 - 1. Viewshed. A viewshed and topographic map shall be developed for the property to determine areas where buildings will be screened or partially screened from view. The proposed cluster shall be located, and the degree of screening shown, based on the effect of perspectives, clustering, and buffer design. The distance of the development on the property from roads or adjoining developments shall be identified. Road speeds shall be specified.
 - 2. Target Reduction. In flat, open land, buildings at least 2,640 feet away from all roads or neighboring developments are considered background elements. This is based on the reduction in apparent size of a building 35 feet high and 60 feet wide, compared to one 330 feet from the road or neighboring development. The building at 330 feet has a perspective façade of 2,100 square feet and a picture plane value of one. At one-half mile, its picture plane value is 0.0156 and buffers are evaluated using this targeted reduction.
 - 3. Topography. Where topography or plantings reduce the picture plane view of the cluster to 0.0156, no further buffering is needed.
 - 4. Road Buffers. These are very effective because plantings or berms have a substantial effect on apparent size due to their proximity to the viewer where located to block a view.
 - 5. Road Speed. Where roads run along the property line, closely spaced plantings combine with road speed to block views by blurring the view and directing eyes to the road. Table 8.306 indicates the screening effect of trees or shrub groupings adequate for clusters that are at least 880 feet from the road. With plantings spaced further apart, an analysis of the screening value of the landscape is required.
 - 6. Cluster Buffers. A buffer may also be located at the edge of the cluster where it screens a building. This approach has the advantage of requiring a reduced length of buffer. The combination of perspective buffering and the opacity of the buffer must meet the targeted reduction.

Table 8.306 Street Right-of-Way Line Planting Providing Screening				
Road Speed (mph)	45	50	55	60+
Tree Spacing (lineal ft)	35	40	45	50
Shrub Spacing* (lineal ft)	56	64	72	80
*A grouping of 5 shrubs, with a spacing of 3 feet on center and maintained at a minimum height of 5 feet, is to be separated from the next group.				

- C. Buffer Approval. The planning director shall review the buffers proposed and ensure they meet the standards of A or B above. Where two landowners agree in writing that clusters on their properties will abut with only a 0.2 opacity buffer, the planning director may approve the development, provided their streets connect.

Section 8.307 Minimum Bufferyard

A minimum bufferyard calculated in terms of the width, plant units, and structures set for each opacity in Tables 8.303A–D and Table 8.304 is provided in Table 8.307. The intent is to ensure bufferyards are predominantly landscaping, with less dependence on structures to create opacity.

Table 8.307 Minimum Bufferyard Standard					
Opacity	Width (ft)	Plant Units	Unit Type	Structure	Structure Height (ft)
0.1	10	0.60	I	None	
0.2	10	1.20	I	None	
0.3	15	1.70	I	None	
0.4	20	2.00	I	None	
0.5	25	2.30	I	Berm	2
0.6	30	2.40	I	Berm	3
0.7	30	2.70	I	Berm	4
0.8	40	2.70	I	Berm	4
0.9	40	2.80	I	Berm	6
1.0	50	3.00	I	Berm	6
1.1	50	2.90	I	Berm	8
1.2	50	3.30	I	Berm	8
Parking	10	1.15	VI	Wall, Hedge*	4
Masonry walls, precast walls, solid fences, berms, or evergreen hedges may be used as appropriate. *If an evergreen hedge is used, the shrubs of the V plant unit type need not be provided.					

{Button}

Click here to obtain form and do individual calculation of user's property. Select desired opacity and plant unit type

Calculate	Opacity	Plant Unit Type	Enter buffer length
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Section 8.308 Constrained Sites

Constrained sites are generally smaller, where the width of the bufferyard takes up more than 10 percent of the site's area. The bufferyard is intended to protect neighbors but can substantially reduce the land area of a site. This section also applies in mature or urban areas because nearly every new development will be responsible for the entire buffer, since neighboring properties were not required to have buffers when built. This section provides narrower bufferyards that rely more on walls and fences to create opacity. Table 8.308 shall be used for constrained sites.

Table 8.308 Constrained Sites					
Opacity	Width (ft)	Plant Units	Unit Type	Structure	Structure Height (ft)
0.1	3	0.70	I	None	
0.2	5	0.80	I	None	
0.3	8	1.30	I	Fence/Wall	4
0.4	10	1.25	VI	Fence/Wall	4
0.5	12	1.55	VI	Fence/Wall	6
0.6	15	1.75	VI	Wall	8
0.7	20	1.95	VI	Wall	8
0.8	20	2.10	VI	Wall	10
0.9	25	2.00	VI	Wall	12
1.0	25	2.50	VI	Wall	12
1.1	30	2.70	VI	Wall	12
1.2	32	3.10	VI	Wall	12
Parking	4	1.00	VI	Wall, Hedge*	4
Masonry walls, precast walls, solid fences, berms, or evergreen hedges may be used as appropriate. *If an evergreen hedge is used, the shrubs of the V plant unit type need not be provided.					

{Button}

Click here to obtain form and do individual calculation of user's property. Select desired opacity and plant unit type

Calculate	Opacity	Plant Unit Type	Enter buffer length
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Section 8.309 Mitigation Bufferyards

Mitigation bufferyards are permitted where there are existing nonconforming uses that seek mitigation (Division 7.300). A wall, fence, or hedge shall be used to provide the maximum buffer in the narrowest possible space. The bufferyard model (Section 8.313) shall be used to meet the desired opacity and walls up to 16 feet in height are permitted. The planning director shall verify that the opacity is met. Where the model indicates the width is not adequate for the plant material, the planning director may direct the use

of plant unit VI and require the use of columnar tree species to place more trees in the available land as approved by the urban forester.

Section 8.310 Arid Bufferyards

In arid environments, trees and shrubs require irrigation and the plant unit is inappropriate. Arid bufferyards will be primarily walls or fences. No plant unit is required, and plantings are primarily intended to provide some landscaping to soften the wall's visual impact. The urban forester shall identify trees, understory, shrubs, and/or cacti that require minimal pruning and are suitable for the jurisdiction and shall indicate the width of the area needed to plant them along adjoining fences or walls. The minimum width may be increased to provide for three plantings per 100 feet of wall. This will increase the minimum width indicated in Table 8.310.

Table 8.310 Minimum Bufferyard in Arid Areas					
Opacity	Width (ft)	Plant Units	Structure	Wall Opacity	Height (ft)
0.1	1	Cacti and arid trees or shrubs shall be planted to provide some visual contrast to the fence or wall.	Fence/Wall	0.5	4
0.2	1		Fence/Wall	1.0	4
0.3	2		Fence/Wall	1.0	6
0.4	3		Fence/Wall	1.0	8
0.5	4		Fence/Wall	1.0	10
0.6	4		Fence/Wall	1.0	12
Parking 0.3	24/10*		Berm/Wall	1.0	4
*Berm/wall width					

{Button}

Click here to obtain form and do individual calculation of user's property. Select desired opacity and plant unit type

Calculate	Opacity	Plant Unit Type	Enter buffer length
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Section 8.311 Structures

Many bufferyards require structures, fences, walls, or berms to achieve the desired opacity. The following standards govern structure design.

- A. Fences and Walls. Up to six feet in height, the developer may choose to use either fences or walls. All bufferyards in Tables 8.307, 8.308, and 8.310 are based on a wall or fence that is 100 percent opaque. It is possible to use fences or walls that are less than 100 percent opaque, in which case the bufferyard model (Section 8.313) shall be used to determine the width and plant material required.
- B. Wall Types. Brick walls are permitted up to eight feet in height and may be either straight or sinuous. Other precast concrete walls are permitted for walls over eight feet in height and required for those

exceeding 10 feet in height. All walls or fences shall be designed by a registered engineer to remain vertical on the soils upon which they are constructed.

- C. Placement of Walls and Fences. The minimum standards assume that the wall is placed on the property line adjoining the lower-intensity property, with landscaping on the development side of the wall.
- D. Berms. Berms are designed with a slope of one in three feet to prevent erosion and permit mowing to be done on the berms. The width of bufferyards in Tables 8.306 and 8.307 accounts for this berm structure. In arid environments where berms will not be planted in grass, berms that are steeper may be permitted by the planning director where they will be stable and will not erode into adjoining land.
- E. Berm Walls. These are a hybrid between a wall and a berm. A wall with a berm toward the lower-intensity use, permitting plantings at the maximum berm wall height, greatly increases visual screening and provides enhanced noise reduction. The width is reduced by eliminating one sloped side of the berm.

Section 8.312 Woodlands

Existing woodlands that are preserved shall count as meeting bufferyard opacity where the following conditions are met.

- A. Opacities of 0.1 to 0.4. Existing trees meeting the tree and understory requirements shall be counted. An area that is five feet wider than the rectangle enclosing them shall define the width of the buffer.
- B. Opacities of 0.5 to 0.9. Woodlands with a width of 50 feet shall be left undisturbed.
- C. Opacities Greater than 0.9. These opacities require a width of 70 feet to be left undisturbed.
- D. Invasive Plants. Invasive plant species shall not be included to meet the woodland definition unless they are removed and replaced with canopy trees on a two-for-one basis.

Section 8.313 Bufferyard Model

The minimum bufferyards in Tables 8.307, 8.308, and 8.310 are all derived or use the bufferyard model to calculate the opacity. A developer may use the model to develop a bufferyard of equal opacity and equal or greater width with different plant material or structures. The planning director shall check such proposals and approve their use, provided the model determines that the selected bufferyard is wide enough for the number of plant units and berms to be used.

{Button}

Click here to bring up bufferyard model

Start model	Enter desired Opacity
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DIVISION 8.400 PLANS AND MAINTENANCE

Section 8.401 Purpose

The purpose of this division is to require plans for all landscaping and plans for its initial, ongoing, and long-term maintenance. A provision for the planning and maintenance of the landscape by the developer ensures it is in good health when the property is purchased. The required ownership of open space ensures that all common open areas are maintained in perpetuity.

Section 8.402 Landscape Plans

All subdivisions and land development plans shall contain a landscape plan. The landscape plan shall meet the following standards.

- A. Plan. The plan shall identify all open space and identify any that is to be dedicated to the jurisdiction, owned, or maintained by somebody other than the property owners' association. Open space areas shall be designated as to purpose, including natural, recreation, and lawn areas. Where condominium maintenance is envisioned, the areas of condominium responsibility shall be identified.
- B. Plantings. A list identifying each type of plant material or structure shall be provided. The area or length governed by the plant requirement shall be specified, and separate planting lists provided to demonstrate that those requirements shall be met.
- C. Invasive Plants. The plan shall identify the areas and types of invasive plants found on the property and the initial actions and long-term maintenance necessary to eliminate such plants.
- D. Initial Maintenance Plan. A plan covering the period of the development's construction shall be provided. It shall specify the maintenance of the planted material and measures to be taken to ensure weeds or invasive plants are eliminated. This period ends with final inspection and acceptance of the subdivision or land development.
- E. Ongoing Maintenance. This covers maintenance, such as lawn mowing or snow plowing, that occurs on a regular seasonal basis. It also covers the maintenance of recreation areas including pools that require daily maintenance or other facilities that have special maintenance needs. An annual budget for such maintenance shall be provided.
- F. Long-Term Maintenance. This covers the maintenance of all plantings of natural areas and open space. Periodic maintenance and inspections of the landscape, natural areas, and other facilities in the open space and the timing shall be identified. Periodic maintenance shall include elimination of invasive species, maintaining storm water management facilities and any structures in the open space. The long-term maintenance plan shall include a budget and creation of a reserve fund to be included in the property owners' association documents.
- G. Maintenance Responsibility. The maintenance role of the developer, property owners' association, and individual property owners shall be specified. The developer shall be responsible for all street trees, bufferyards, open space, and natural area maintenance, until the development is accepted. Property owners are responsible for maintaining lawns and yard vegetation and replacing any installed plant material they remove or cut. After acceptance, the property owners' association becomes responsible for maintenance.

- H. Surety. The developer shall provide surety for the installation and maintenance of the plant material until the property and landscaping is accepted as complete and in good condition.
- I. Approval. Plans that meet the standards of the code shall be approved. However, the planning director may specify changes to the plan in terms of plant unit types, placement of individual plants, and movement of plants to better achieve the goal of the landscape plan and the protection of neighbors or the environment.

Section 8.403 Maintenance Guarantee

The developer shall have a minimum two-year maintenance agreement with the installer of the plant material to replace any material that dies or is found to be substandard. Regardless, the developer shall be responsible for the replacement of any dead or diseased vegetation until the development is accepted by the jurisdiction.

Section 8.404 Ownership

The ownership of all open space and lots shall be specified as private, condominium, or association.

- A. Lots. Lots may be individually owned or may be part of a condominium association that assumes some maintenance responsibilities.
- B. Open Space. The open space may be owned in any manner provided in this section and specified in the approval of the subdivision or land development plans and documents.
 - 1. Ownership. The property owners' or homeowners' association may own the open space.
 - 2. Jurisdiction. The developer may offer some or all of the open space to the jurisdiction, which may choose to accept ownership of some or all of the offered land. It is the jurisdiction's decision to accept, modify, or reject such dedications. County, state, or national open space organizations shall be treated the same as the jurisdiction.
 - 3. Open Space Organizations. Where open space organizations approved by the jurisdiction exist, the developer may reach agreements with them, including annual fees for accepting such land. Any such agreement shall provide for reversion to the property owners' association should the organization no longer be able to maintain the land.
 - 4. Farm, Ranch, or Timber Owners. In the CS, AG, or N districts, the original or other owner may be the owner of some or all of the open space for the purpose of operating the agricultural or silviculture uses. The development plan shall identify land to be used for agriculture or silviculture. There shall be suitable use restrictions approved by the planning director and attorney.

ARTICLE 9 SIGNS

DIVISION 9.100 PURPOSE

Section 9.101 Purpose

This article regulates all signs and controls their size, height, and placement. The following are purposes of this article.

- A. Safety. Signs that are too large, too bright, or too numerous distract travelers on roads, may be confused with traffic lights or other traffic signage, and can cause accidents. In addition, having too much signage in one area not only reduces any particular sign's value but can create a further hazard, because the message and destination indicated cannot be picked out in time for drivers to safely make a lane change or turning movement.
- B. Character. Signs can alter the character of an area by altering the landscape or streetscape.
 - 1. In rural areas, clear views to the horizon define the rural character and signs destroy its scenic value and rural character by blocking views to horizon or a scenic feature.
 - 2. In residential areas, signs are generally incompatible with the character of homes and yards. Finding a specific house is of primary importance. Avoiding clutter that distracts from the residential character is critical.
 - 3. Nonresidential areas have businesses that need signs so that customers can find them, and nonresidents can determine what is available. The individual building or use needs to promote itself.
- C. Aesthetics. The jurisdiction is concerned with having signs that are attractive and do not distract from a building's architecture or overwhelm the resident or visitor. The height, total area, placement, and lighting of signs are regulated in order to achieve this. Where the developer of a number of uses provides a uniform architectural and sign plan that controls architecture and the fonts and colors of signs, this promotes better aesthetic quality.
- D. Navigation. There is a need for travelers to understand traffic regulations, route or street names, and addresses. Address numbers are mandatory. Other wayfinding signs are important in some jurisdictions with a tourist economy where visitors outnumber residents.
- E. Balance. The regulations of this article strike a balance between providing information with signs, ensuring safe roads, and preserving the desired character of the jurisdiction.

Section 9.102 Types of Signs

The following sign types are regulated.

- A. Property signs. These signs are on the property or building and convey information the owner or tenant desires.
- B. Billboards. These are commercial uses where a portion of the property is rented to a sign company or advertiser to produce additional income for the property owner. They are controlled by Article 2 uses according to the districts in which they are located.
- C. Wayfinding Signs. These are signs in the public right-of-way intended to control traffic and provide road information, and are used for wayfinding, particularly for people unfamiliar with the area.

- D. Temporary Signs. These are temporary signs that the owner of the property wants to post.
- E. Mandatory Address Signs. Each property shall display the address in a place where it is clearly visible.

Section 9.103 General Regulations

The following general standards shall apply to all signs.

- A. Obstructions. No sign may physically block or obstruct the use of any building access, window, fire escape, door, other entrance or exit, or ventilation.
- B. Signs on Trees or Utility Poles. No sign shall be attached to a tree or utility pole.
- C. Public Right-of-Way. Within a public right-of-way, only signs permitted in Division 9.400 shall be permitted, and their erection must be approved by the jurisdiction's engineer as safe and not a traffic hazard due to their proposed locations.
- D. Metal Signs. No metal sign shall be located within eight feet vertically and four feet horizontally of electric wires or conductors in free air carrying more than 48 volts, whether or not such wires or conductors are insulated or otherwise protected.
- E. Electricity. Signs that are lighted or have electrical motors shall be wired with ground fault interrupters controlling their electric supply, in accordance with the building code.
- F. Change of Ownership, Tenant, or Advertiser. A change of ownership of any sign or zoning lot shall cause the new owner or tenant to secure new sign permits as provided in this article and to conform to this ordinance.
- G. Changes to Signs. No sign permit shall be required for the following changes to permitted signs.
 - 1. Change in the copy of a sign designed for replaceable copy, including signs with manually changeable letters and mechanical or electronic signs.
 - 2. Painting, cleaning, or repair of electrical, lighting, or mechanical equipment on the sign.
 - 3. Replacement of the covers of internally lighted sign faces, lost letters where individually mounted, or the entire sign frame where damaged by wind. No change in sign size, height, type of lighting, or form of message presentation shall be permitted.
- H. Setback Requirements. All freestanding signs shall be set back at least one foot from the front, side or rear property line for each foot in height of the particular sign or signs. The maximum required setback is 30 feet, provided the sign is designed to collapse on the property on which it sits.
- I. Maintenance and Repair Required. The appearance and safety of a sign shall be maintained at all times. The sign shall be repainted as necessary to prevent rust, corrosion, rotting, or other deterioration in appearance or structural safety of the sign. The source of illumination shall be kept in safe working order at all times.
- J. Attachments to Be Secured. All letters, figures, characters, and embellishments on a sign and its support shall be attached so as to withstand winds that could detach the parts.

DIVISION 9.200 SIGN BUDGET

Section 9.201 Approach

This ordinance regulates signs by way of a sign budget that identifies the maximum total area of the signs on a property. This allows landowners to choose the mix of signs they believe will best identify them, advertise, or express themselves. Some regulations apply to specific sign types or specific uses. Residential single-family, two-family, attached single-family, and multifamily uses with less than 30 units in a building on a single lot are regulated by Section 9.203. The nonresidential sign budget covers advertising of businesses, products, services, or self-expression (Section 9.204).

Section 9.202 Signs Exempted from Sign Budget

Some signs are exempted from the sign budget because they are generally informational signs having health, safety, and welfare purposes, often designed to prevent accidents and to be read from a distance of less than 20 feet by pedestrians or from vehicles. Several are exempt to avoid conflicts with other provisions of the ordinance or because they direct automobile movement or indicate parking limitations.

- A. Billboards. These are exempt for two reasons. Billboards are a commercial use rather than an identifier of a use. They are located on a different property than the use advertised. Billboards are regulated as land uses in Article 2.
- B. Health and Safety Signs. These are signs that warn the public or customers of dangers or caution them to avoid conflicting traffic movements.
 - 1. Danger Signs. These are signs that warn of danger that can threaten life or property. Examples are warnings of high electrical voltage that can cause death or severe injury or warnings of buried cables or pipelines where disruption can cause injury, death, and/or disruption of service.
 - 2. Pedestrian Warning Signs. These consist of informational or warning signage, mounted on or near doors, that alert visitors to entry, exit, automatic doors, handicap access, hours of operation, or open or closed status, as well as anti-burglary signs about the use of cameras or the absence or security of cash on the premises, and signs that warn pedestrians or visitors of the possibility of injury. The maximum total area for such signage is limited to 1 square foot per door or danger area. The signage shall not be readable from a distance of 30 feet.
 - 3. Circulation Signs. Direction arrows on pavement, entry and exit signs, direction, movement, parking restrictions, and other traffic and warning signs are permitted, provided they are black, white, or yellow. If the signs display corporate symbols, or are in corporate colors, that portion of their area shall be included in the sign budget.
 - 4. Gas Stations. The gas or diesel pumps shall not be counted as sign area, provided the signage on them explains the usage of the pump. Further, the number of pumps is unrelated to building façade in a calculation of the sign budget. Any signage mounted on or attached to the pump that is unrelated to the operation of the pumps or safety in refueling shall be counted toward the sign budget because these increase the area occupied by signs unrelated to the safe operation of the pumps.
- C. Handicapped Signage. All handicapped signage required by this ordinance or the building code is exempt from the budget because it is critical to providing access to a protected class.
- D. Aesthetic. The following uses are exempt because they are important to the enjoyment of pedestrians and the attractiveness of shopping areas.
 - 1. Window displays. Window shopping is an important aspect of the shopping experience and the aesthetic element of street façades in commercial areas. Transparency is a way of measuring this and is a required element of this ordinance. Displays in the windows of goods sold in the store are not signs and are exempted from the regulations, provided they meet the following requirements.



Figure 9.202D Window displays are not signs.

2. Pricing information shall not be more than 48 points in size, so as to be readable only to pedestrians near the display window.
 3. Where boxes, large bottles, or other containers of a single product are stacked in the window to a height of three feet or more, they shall be considered signs, as they are visible from a distance and often available to the customer to pick up from the stack.
- E. Street Furniture. Street furniture can be a desired element of a pleasing streetscape. In some cases, it can be required by sections of the ordinance. This includes sculpture, benches, clocks, drinking fountains, fountains, and street pavement materials and textures. Signage placed or printed on them shall be considered signage. (If a bench has signage, the sign area on the bench counts as a sign.)
- F. American, State and Jurisdiction Flags. A single flag for each building shall be exempt from the sign budget, provided that the flag length is no more than 25 percent of the pole height, and the pole height is no higher than the maximum height in the district, or 125 percent of the building height, whichever is less. Any portion of a flag area greater than this shall be part of the sign budget.

{Sidebar}

The above standard is introduced because there is widespread use of very tall flag poles, large flags, or multiple flags by commercial uses such as gas stations, fast food restaurants, automobile dealers, and realtors, whose height and size serve to attract the eye to the use from a distance. They are often many times higher than the buildings on the site, far larger than flags associated with similar size building, and can exceed the total sign budget. The display of the flag is all that is needed to indicate patriotism; a bigger flag does not mean one is more patriotic. The US military flies large ceremonial flags on special occasions or for very large bases; small commercial uses have no need for such large flags, except to advertise themselves.

{/Sidebar}

- G. Address Signs. All address signs (Section 9.404) are exempt from the sign budget.
- H. Interior Signs. Signs on the roofed interior of shopping malls that are visible only within these enclosed spaces, not to those outside the building, are exempt as they are within the building and will not impact character and pose no safety issues for vehicular movement.

Section 9.203 Residential Area Sign Budget

A sign budget sets the total number of square feet of signage permitted on a property. In residential areas, the enjoyment of residents and the residential character are protected by limiting signage and thus enhancing the street's visual appeal, as distinct from nonresidential areas, where communication by business owners to potential customers is an important consideration. In residential areas, signage is more heavily restricted. Permanent sign budgets differ for single-family, two-family, and attached single-family uses, on the one hand, and multifamily uses on the other.

- A. Single-Family, Two-Family, and Attached Single-Family Uses. The residential sign area is limited to five square feet, excluding an address sign with the street number and/or fire grid number (Section 9.404). A total of five square feet is permitted for permanent signs, which may provide the owner's name, place name, and second street number.
- B. Multifamily Uses. The permanent sign area is limited by Table 9.204A, excluding the street or unit address signs. Where there are multiple buildings, signs displaying building numbers or letters are limited to two square feet. Signs displaying unit numbers are limited to one square foot. These signs do not count toward the maximum allowed for the development.

Section 9.204 Nonresidential Area Sign Budget

A sign budget sets the total number of square feet of signage permitted on a property. The sign budgets for freestanding buildings differ from those of attached properties such as shopping centers or tall multistory buildings. Freestanding buildings are permitted a freestanding sign in addition to other types of signage on the property because freestanding uses have side yards that separate them from their neighbors. Attached uses require signage for each use. Taller buildings and mixed-use buildings have need of multiple signs. Shopping centers or parks, whether retail, office, or industrial, have a separate budget to create an identity for the shopping center or park. The budget requires measuring the street façade of the building and multiplying the façade area by the applicable multiplier in Table 9.204A. Standards vary by zoning district and, in some cases, by uses or building type. The following describes the building types.

- A. Attached Building. These are buildings with a number of leased or owned spaces along the façade, with each use permitted a sign. The façade area of the leased space shall determine the sign area. The development is permitted separate signage (Section 9.216).
- B. Freestanding Building. These are freestanding buildings with a single use, with all signage serving that use.
- C. Multifamily Uses. The façade area is limited to a height of 16 feet. While buildings may be of similar heights, residential structures do not need the same sort of sign area as nonresidential structures.
- D. Uses Selling Gasoline. This includes gas stations, convenience marts, and gas station and restaurant combinations. Buildings that have multiple uses within them are treated as a single use with façade area used to calculate the sign budget. The share of the floor area or façade is used to determine the signs allowed for each use.
- E. Multistory or Mixed-Use Buildings. In the S, AU, U, UM, and UC districts, these buildings have very large floor areas. The sign budget applies to all signage in these buildings. The owners may divide the budget between street- or pedestrian-level signs, and signs on upper levels. Upper-level signs for building names and tenants occupying more than 30 percent of the floor area may be permitted. The

appropriate multiplier in Table 9.204A shall be multiplied by façade height as follows. Buildings under 100 feet shall use 50 feet or actual height, whichever is lower; for each additional foot of height, the façade height in the calculation shall be increased by .006 feet.

Table 9.204A Sign Budget Multipliers				
Building Type	Multipliers			
	U, UM, UC	AU	S, AG, N	E, CS
Attached Building Use	0.110	0.129	0.106	0.088
Freestanding Buildings	0.135	0.158	0.130	0.108
Multifamily	0.025	0.025	0.020	0.016
Gas Station	0.200	0.234	0.192	0.160
Warehouse and Distribution	0.075	0.088	0.072	0.060
Multistory or Mixed Use ¹	0.120	0.120	0.108	Not Permitted
¹ See Section 9.204E.				

- F. Multiple Street Frontage. Where a shopping center or building has frontage on more than one street, increased signage is permitted if it is to be displayed on more than one façade. The total sign budget shall be increased by 65 percent for two frontages, 100 percent for three frontages, and 125 percent for four frontages. The increased signage shall be on the sides for which the increase is earned.
- G. Speed Multiplier. The sign sizes calculated by way of Table 9.204A are based on a building's fronting upon two- to four-lane roads with maximum speeds of 25 mph. In the AU, S, E, CS, AG, or N districts, the values shall be increased as in Table 9.204B.

Table 9.204B Adjustments to Sign Budget for Road Speed and Lanes					
Road	Percent Increase over Table 9.204A				
Maximum Speed Limit	30 mph	35 mph	40 mph	45 mph	55+ mph
2-4 Lane Road	0%	2%	5%	10%	15%
6-Lane Road	0%	3%	6%	12%	17%

- H. Where a bonus is provided for a coordinated architectural and sign plan (Section 9.214), it shall be applied after all other adjustments of this section are applied.

Section 9.205 Sign Area

Sign area is measured differently for framed or letter signs for all sign types. Measuring the sign area is critical to determining the sign budget. Figure 9.205A illustrates how the measurement of size is done, in accordance with the following. The area of framed signs is measured from the outside of the frame. For letter signs, it is a rectangle encompassing all the letters.

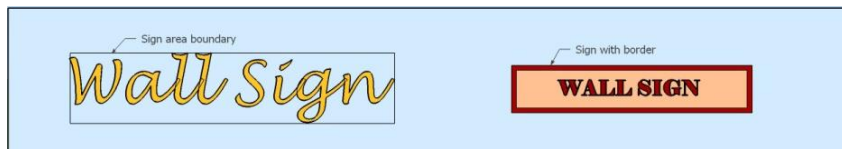


Figure 9.205A Sign area measurement for letter and framed signs

- A. **Framed Signs.** A framed sign that is painted or otherwise attached to a wall with a contrasting color or texture border surrounding the letters is measured to the outer dimensions of that frame.
- B. **Letter Signs.** Where the sign is composed of letters attached or painted on the wall, a rectangle that encloses the letters is the sign area.
- C. **Canopy Signs.** Canopies, as found over gas pumps, drive-throughs, or similar sheltered areas, can be used for signage. The framed or letter sign area as described in 9.205A and B shall be the sign area for a canopy sign, provided that the rest of the canopy is not painted in corporate colors. If the rest of the canopy is painted in corporate colors, the entire face of the canopy is the sign area. Figure 9.205C shows the difference in canopies that meet the standards.

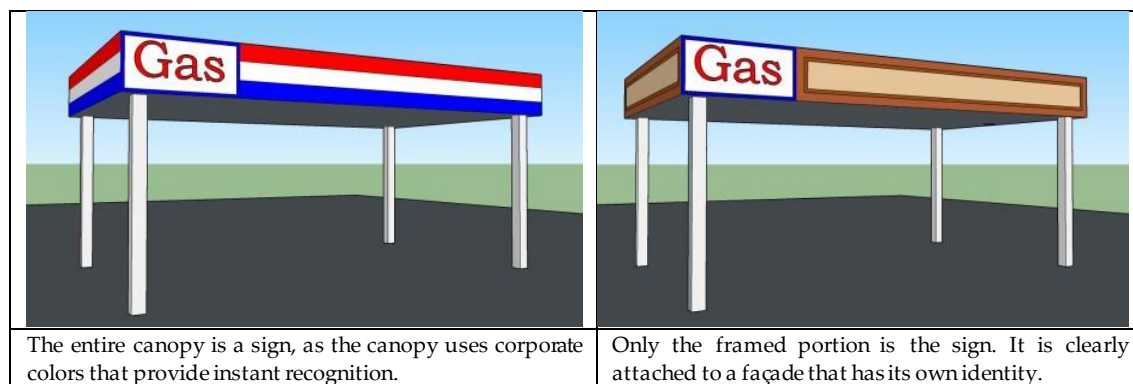


Figure 9.205C Canopy signs

Section 9.206 Wall Signs

Signs can be mounted on walls below the roof. They may be in frames or letter signs mounted or painted on a wall (Figure 9.206). They may be the only sign for a use. Marquee signs shall be considered wall signs. Marquee signs may project over the sidewalk on public streets, provided the lowest point is at least 16 feet above the sidewalk and projects over no more than 50 percent of the public sidewalk width. The area of the marquee sign is the area of the faces of the marquee that carry the message. Other faces not having signage shall be coordinated in color with the façade of the buildings.



Figure 9.206 Showing letter sign, painted sign, and framed sign

Section 9.207 Projecting Signs

Projecting signs can extend from the building façade over a sidewalk or other public right-of-way. Where such signs are used, the total sign budget (Sections 9.203 and 9.204) shall be reduced by 40 percent. The projecting sign shall not exceed 36 square feet nor extend out more than half of the sidewalk width. All such signs shall be at least 12 feet above the sidewalk.

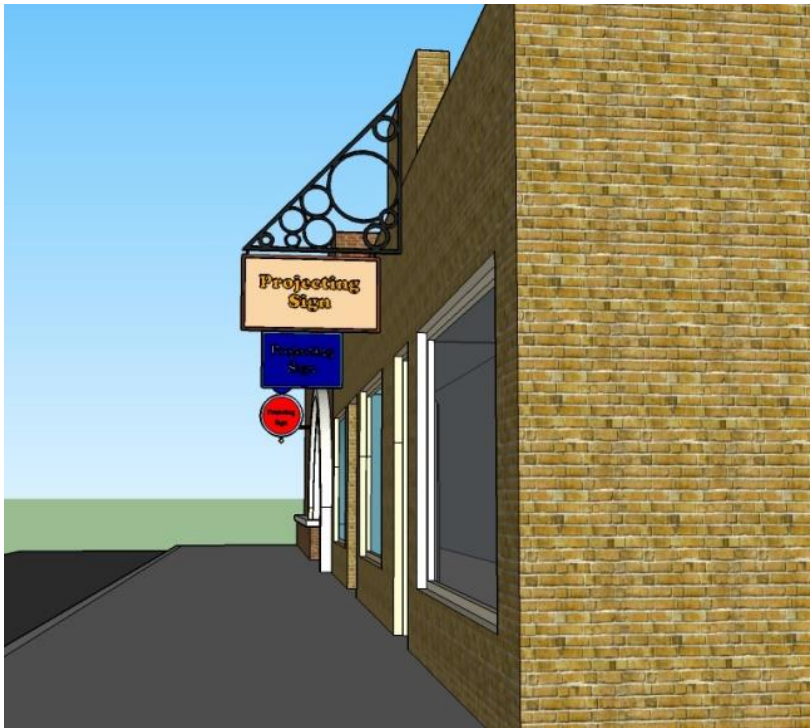


Figure 9.207 Projecting sign

Section 9.208 Hanging Signs

Hanging signs may be suspended from an arcade or canopy that is extended over a pedestrian precinct. Such signs shall be mounted so there is at least 10 feet of clearance above the pedestrian walkway. They shall be no more than three feet in height and no more than 18 square feet in area. Where hanging signs are used, the maximum sign budget (Sections 9.203 and 9.204) shall be reduced by 50 percent.



Figure 9.208 Hangingsigns

Section 9.209 Freestanding Signs

Freestanding signs are mounted on the ground at least 10 feet from the building. There are two types of freestanding signs: monument signs and pole signs (Figure 9.209). The following standards apply to all freestanding signs.

- A. Maximum Height. Maximum height is measured to the highest point on the sign from the elevation of nearest point on the abutting road as indicated in Table 9.209 and varies by site area and road speed.
- B. Maximum Sign Area. The maximum sign area is shown in Table 9.209.

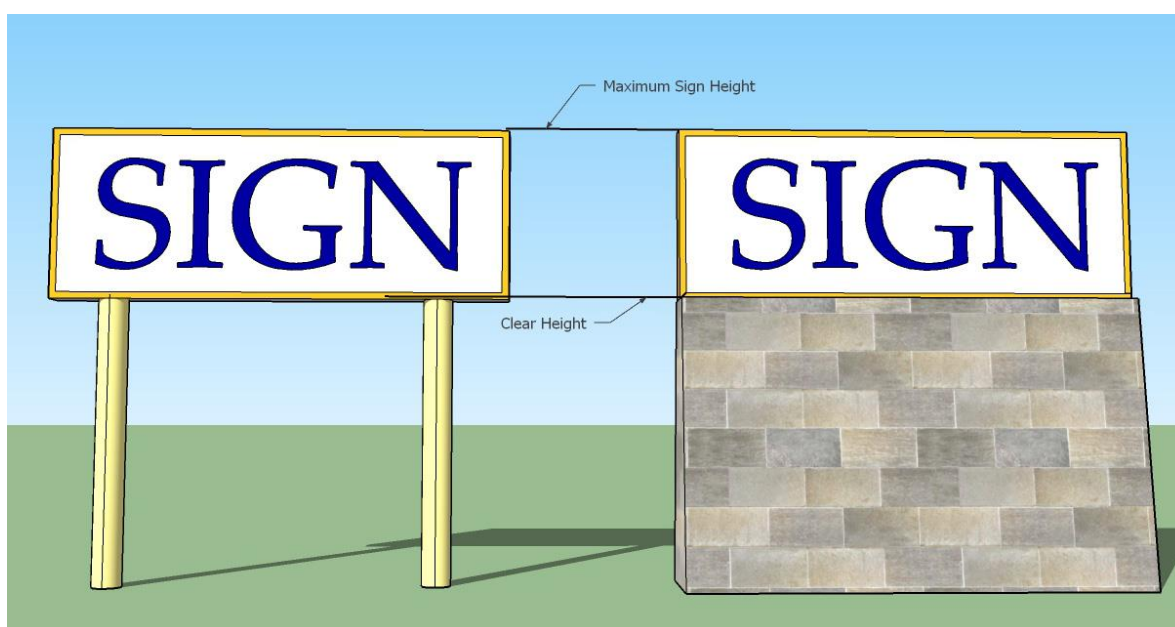


Figure 9.209 Pole sign

Monument sign

- C. Minimum Clear Height. This is the minimum height above ground level of the bottom of the sign face for both pole signs and monument signs. It is 70 percent of the maximum height. The space below the minimum clear height must contain no words or symbols.

Table 9.209 Maximum Freestanding Sign Height and Area					
Standard	Site Area (ac)	Speed on frontage Road (mph)			
		25–34	35–44	45–55	55+
Maximum Sign Height (ft)	1–4	10	11	12	13
	5–19	13	14	16	17
	20–39	17	19	20	22
	40–100	22	24	27	29
	100+	29	31	35	38
Maximum Sign Area (sf)	1–4	20	26	35	46
	5–19	26	34	45	60
	20–39	34	45	59	78
	40–100	44	50	77	101
	100+	57	75	100	131

Section 9.210 Roof Signs

This type of sign is discouraged in favor of wall signs. The developer shall choose where to use roof, wall, or window signs. Where the roof sign is selected, the total sign budget (Section 9.302) shall be reduced by 20 percent. An exception to this can be obtained via a coordinated architectural and sign plan where roof signs are the best fit for the proposed architectural style (Section 9.214). As viewed from the street, the top of the roof shall be visible above the sign (Figure 9.210A) as viewed from five feet above the curb line of the street. In any case, no roof sign shall extend higher than the roof (Figure 9.210B).



Figure 9.210A Roof sign legally mounted



Figure 9.210B Illegal roof sign that is higher than the roof peak

Section 9.211 Window Signs

Painted, stenciled, or etched window lettering or signs (neon signs, for example) suspended next to the glass are permanent window signs. The permanent signs may occupy no more than 15 percent of the glass. Signs made of paper or other material attached to the glass are temporary window signs and are part of the sign budget, but may not cover more than 10 percent of the window area. Figures 9.210A and B illustrate these types of window signs. Window displays meeting the standards of Section 9.202D are not considered window signs.



Figure 9.211A Permanent window sign

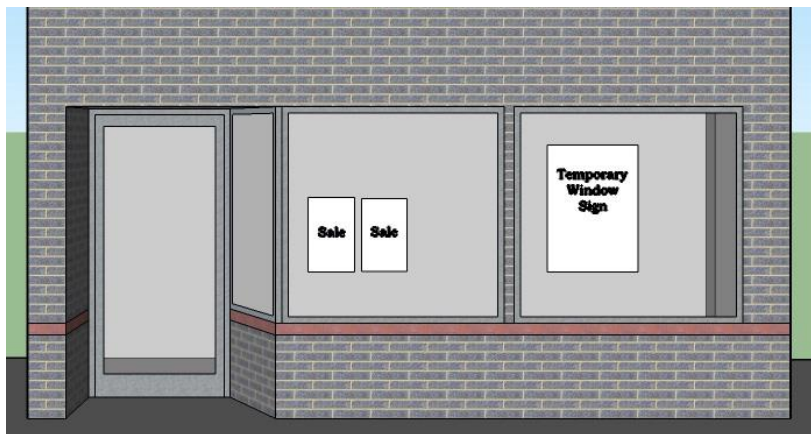


Figure 9.211B Temporary window signs

Section 9.212 Awning Signs

Awnings project from the wall and are fixed or movable. They are often used to shade the windows. The following rules apply to awning signs.

- A. Single Retractable Awning. Only the area in lettering measured as in Figure 9.205 A is counted, as this is primarily used as a sunshade, provided the façade faces east, south, or west. This also applies to a rigid awning mounted over a single window or door on the building.
- B. Shopping Centers. Where the shopping center dictates a uniform awning color, whether the awning is fixed or retractable, only the area of lettering is measured as above.
- C. Rigid Awnings. The awning in its entirety is considered a sign unless:

1. Only a single awning has writing or a symbol on it.
2. If the use is a chain facility, the awning and sign shall not use corporate colors or corporate fonts.

Section 9.213 Movable Signs

Movable signs include sandwich boards, sawhorses, small pole signs, or other types of stands (Figure 9.212). These signs are movable and may be displayed either permanently or occasionally. The geometric area of a movable sign but not its legs shall be used as sign area. Movable signs are limited in area and setback by zoning district as follows.

- A. Urban (U), Urban Mid-Rise (UM), and Urban Core (UC). Uses with an outdoor eating and display area adjacent to the sidewalk are permitted one menu sign with an area of four square feet at the entrance to the outdoor area. No uses without an outdoor space are permitted a movable sign.
- B. Auto-Urban (AU). The maximum sign area is eight square feet and up to four signs are permitted. The signs shall be at least 10 feet back from the property line and placed on paved or adjacent grass areas of the site.
- C. Suburban (S) and Estate (E). The maximum sign area is six square feet and up to two signs are permitted. The signs shall be at least 15 feet back from the property line and placed on paved or adjacent grass areas of the site.

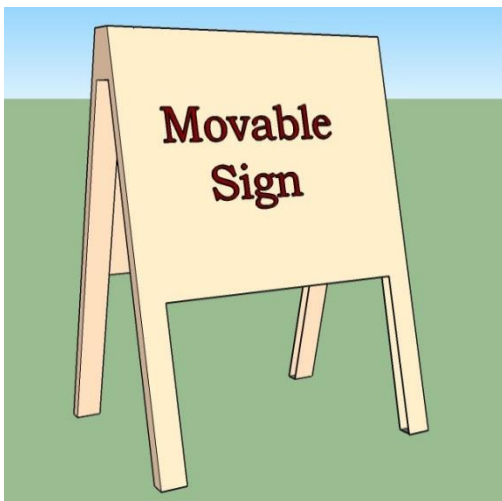


Figure 9.213 Sandwich board or temporary movable sign

- D. Countryside (CS), Agriculture (AG), and Natural (N). The maximum sign area is five square feet, except for uses with outdoor displays or sales areas with an area greater than 20,000 square feet, where total sign area is 20 square feet and up to four signs are permitted.

Section 9.214 Flags, Banners, and Kinetic Signs

Flags, banners, pinwheels, air dancers, and other decorations strung or flown over parking or display areas are considered signage and shall be part of the sign budget. These seek to attract the eye to the use or products being sold. The size and/or number of these devices displayed, their height, and their display against the sky is designed to attract the eye to that location and serve as a distraction, adversely impacting community character. The sign budget shall be reduced by 25 percent where these are used, and such

developments are ineligible for a coordinated architecture and sign plan. One American, state, and municipal flag on poles are exempt from the sign budget as per Section 9.202F when meeting the size requirements of that section. Larger flags are part of the sign budget.

Section 9.215 Coordinated Architectural and Sign Plan

A shopping center developer may submit a coordinated architectural and sign plan and receive increased sign area. The plan shall provide an overall architecture design with unified materials, colors, and articulated design that creates a sense of place and character. There shall be uniform signage requirements, including color and design standards and prohibition of corporate signs using corporate colors. This includes uniform use of wall or projecting signs. Where the plan is approved, the sign budget area shall be increased by 12 percent. See Section 9.216 for approval of the coordinated architectural and sign plan.

Section 9.216 Approval Criteria for Coordinated Architectural and Sign Plan

In approving a proposed coordinated architectural and sign plan, the planning commission shall apply the following standards.

- A. Local Context. Styles and materials shall be in accordance with the local context of the community or create a strong sense of place and identity.
- B. Materials. The plan shall define a palette of materials, including brick, stone, or wood, in an overall design that creates a clear and unique identity. Stucco or Dryvit should not cover more than 50 percent of the façade surface, except where it mimics local context materials such as adobe or historic use of that material.
- C. Color. The buildings shall be of uniform color or a color palette covering application to façade, trim, roofs, sign fonts, color, and frames, and windows and door trim or glass types.
- D. Vertical Elements. Vertical elements such as towers, increased stories, entrance features, or other treatments shall be used to emphasize important buildings, corners, or selected uses, adding visual interest to the façade.
- E. Spaces. The façade shall include offsets to enlarge the pedestrian spaces that provide for an expanded pedestrian precinct, outdoor eating, or seating. This includes the use of arcades.
- F. Awnings. Awnings may be used throughout the development or to highlight areas and to provide protection from sun or precipitation at windows, entrances, and outdoor eating areas.

Section 9.217 Nonresidential Development Signs

Monument or pole signs that provide a locational identity for a shopping center or collection of buildings such as office, business, or industrial parks are controlled by this section. The size of the sign is limited by Table 9.217 and is related to the speed limit on the road from which it is to be seen. The development sign's purpose is to identify the development by name and/or symbol as a place or destination. The developer may choose to use part of the permitted area of the sign as a secondary sign element to display the names of businesses in the shopping center or park. The developer wishing secondary signage shall designate the area for such signs in the application and has control over which uses are listed. Office, business, or industrial parks may use this option or Section 9.218.

- A. **Primary Sign.** This may be the name and/or symbol for the shopping center or park. It is referred to as primary because it is the sign's purpose and thus shall have a minimum area as indicated in Table 9.217.
- B. **Secondary Sign.** This sign may contain the names of individual uses in the shopping center or park. The number of stores or uses that may be listed is limited by the minimum letter sizes permitted.

Table 9.217 Nonresidential Development Signs						
Speed Limit m(ph)	Maximum Height (ft)	Maximum Width (ft)	Minimum Clear Height (ft)	Maximum Sign Area (sf)	Minimum Primary Sign (sf)	Minimum Letter Size (in)*
25	20	5	15	70	30	6
30	24	6	18	100	40	7
35	30	7	22	155	65	10
45	40	9	28	275	110	14
55 or more	50	10	32	360	145	19
*Vertical height in inches of letters on secondary sign for tenant names						

- C. **Minimum Clear Height.** For freestanding signs, this refers to the height as indicated in Section 9.209.
- D. **Number of Development Signs.** The following rules govern the number of signs permitted for a shopping center or park.
1. A limited-access road frontage with no access to a development is permitted one additional sign with a total sign area equal to that of the sign on the road from which it takes access.
 2. A development that has 600 feet of frontage on an arterial or collector street is permitted one sign on that street.
 3. A development that has 1,500 feet of frontage on an arterial street may have two signs with an area 180 percent that in Table 9.217.
 4. A development that has a combined frontage of at least 1,200 feet and full access on two arterials may have two signs with an area 180 percent that in Table 9.217. A development with less frontage is limited to one sign.
 5. A development that has a combined frontage of at least 2,200 feet and full access to three arterials or collectors may have three signs with an area of 250 percent of that in Table 9.217.
 6. Where the development occupies an entire block, it may have signs on each road.
 7. The increased sign area permitted above is to be distributed proportionally to the different locations, taking into account the speed of each road, and shall not be used to increase the area of a single sign.

Section 9.218 Residential Subdivision Entrance Signs

Residential subdivisions may erect entrance features pursuant to this section that identify the neighborhood and the development. Office, business, or industrial parks may use the entrance signs specified in this section rather than those of Section 9.217. The following rules apply.

- A. Subdivision or Development Name. The development may have an entrance feature displaying the name of the development at entrances to the development. Such signs may be monument signs or walls on either side of the entrance. Table 9.218 governs the size of the sign and its mount. The areas for walls and monuments are different. Both are governed by the size of the development and adjusted for the number of entrances.
1. Development size in acres is divided by the number of entrances to determine the size used in Table 9.218.
 2. Where only walls are used, the area is the total area of the wall that may be located on both sides of the entry street.
 3. Where monument signs are used, the area in Table 9.218 refers to a pair of monument signs on either side of the entrance, with each having that size. All monument signs in a development shall be composed of the same materials

Table 9.218 Residential Entrance Signs						
Area in Acres	Wall			Monument		
	Area (sf)	Height (ft)	Sign Area (sf)	Area (sf)	Height (ft)	Sign Area (sf)
Less than 25	240	4	24	15	5	6
26–50	400	5	35	18	6	7
51–100	500	5	48	32	8	12
More than 100	700	5	60	50	10	20

- B. Neighborhood Identity. The jurisdiction believes that neighborhood identity is important to creating a sense of community. All neighborhood residential developments shall place the neighborhood's name or symbol above the development name on the sign. The following rules shall apply to the neighborhood identity.
1. When the first subdivision occurs in a superblock, the jurisdiction shall approve the neighborhood name and symbol, if one is not already identified in the comprehensive plan.
 2. All subsequent developments shall be required to install that neighborhood's sign. Such a sign shall be a minimum of 15 percent of the sign area in Table 9.218.
 3. Developments approved prior to the date of this ordinance shall install the neighborhood identification signs provided by the jurisdiction or may install a new sign for the neighborhood and development identical in size to the old sign plus the identification sign.

Section 9.219 Murals

The provision of murals may be a desirable addition to the environment where they are to cover graffiti, improve the visual character of blank walls facing the street or sidewalk, or create a specific character. (Entertainment districts are an example.) As such, they often cover entire walls and thus would not be within the sign budget. To provide for their use in areas desiring murals or artistic overlay, landowners shall apply for a zoning amendment creating a special signage overlay district.

- A. Mural Overlay District. The jurisdiction may create a mural overlay district with standards governing the façades, types of fenestration, and percentage of façades that may be covered. In these districts, a mural shall not count as signage regardless of whether the subject matter deals with the services offered on the premises, except that murals that meet the definition of adult uses shall be treated as such.
- B. Artistic Sign Overlay District. This district may be created by the jurisdiction where it desires signage that is artistic and three-dimensional, as was common in signs in the distant past. This district permits signs that are three-dimensional projecting signs, overhead signs, wall or roof signs that are three-dimensional sculptural projections advertising the products available within. The maximum sign budget shall be reduced by 50 percent from that in Table 9.204A.
- C. Entertainment (EO) Overlay District. Where an EO district exists or is created, the sign budget shall be increased by 50 percent and lighting may be 40 percent brighter than otherwise permitted. All signs may be electronic with changing images or text.
- D. Approval. The zoning overlay district requires approval by council.

Section 9.220 Exterior Stock

The stacking of stock or stock in cases or boxes outside a building shall be considered signage and the area of such stock that is visible from the street shall be considered the area of that sign. Where a shopping center, block, or area in a jurisdiction obtains a temporary permit for sidewalk sales, the material for sale on the sidewalk shall not be considered a sign.

DIVISION 9.300 TEMPORARY SIGNS

Section 9.301 Purpose

Temporary signs are intended to provide information of a temporary nature that is unrelated to essential information about a use conveyed on its permanent signage. It is understood that landowners may want or need such temporary signage from time to time. Such signage, if uncontrolled, can become an eyesore and detract from the character of the area.

Section 9.302 Temporary Residential Signs

Every residential landowner has a right to post a temporary sign with a maximum area of five feet, no closer than five feet to the street right-of-way, with a maximum height of four feet or one foot above snow line in winter months when there is snow on the ground. Temporary signs may be displayed for a maximum of 75 days per year. More than one sign may be displayed, provided the total area is not exceeded and the cumulative total display time is no more than 75 days per year.

Section 9.303 Temporary Nonresidential Signs

Except for temporary construction signs (Section 9.304), all temporary signs shall be counted as part of the sign budget and not limited in display time.

Section 9.304 Temporary Construction Signs

These signs are typically erected by the developer, contractor, or builder while the development is under construction. A temporary sign permit may be approved at one-half the area of the final sign budget for the use. The planning director may request detailed plans or other material, if needed, to determine the sign budget for the use or development. The following additional rules shall apply.

- A. Erection. No signs shall be approved until any development and building plans have been approved and earthmoving or construction has begun on the site.
- B. Removal. All temporary construction signs shall be removed prior to the granting of occupancy permits.

Section 9.305 Special and Public Interest Events

Special and public interest events are temporary uses and thus their need for signage is temporary as well. This use can occur on developed property or on land or a portion of a property that is currently vacant. The following rules apply.

- A. Use. Eligibility for these temporary signs is contingent upon the temporary use permit being approved.
- B. Existing Building. Where an existing building is used, the sign budget for that building shall be used to determine the size of the temporary sign as 25 percent of the building sign budget.
- C. Vacant Land. Where the land is vacant or a farm field or pasture, then there is no use or building upon which to base the sign budget. The applicant for such uses shall provide information on proposed signage as part of the application for a temporary use permit. The special or public interest events are limited to no more than three times per year and signage for each event shall be allowed for no more than 25 days. The maximum temporary sign budget is based on property size or the portion of the property to be used for the event.
 - 1. Property of two acres or less: 140 square feet.
 - 2. Properties of 2.01 acres to 10 acres: 250 square feet.
 - 3. Properties greater than 10 acres: 350 square feet.
- D. Off-Site Directional Signs. These are permitted using the wayfinding sign provisions of Sections 9.405–9.409. However, they may be installed no more than three days before the event and must be removed no more than one working day after the closure of the event.

DIVISION 9.400 HIGHWAY AND WAYFINDING SIGNS

Section 9.401 Purpose

This division covers highway signs, wayfinding signs, and place signs. The jurisdiction has compelling interest in these signs for a variety of reasons. All these signs shall be located in the public right-of-way or on public land.

- A. Highways. Highway signs are critical to the safety of highways, informing the public of the laws for safe highway usage. They are also critical to informing the traveling public of road types and names, permitting efficient travel, and are posted in the road right-of-way. They shall conform to applicable federal, state, or jurisdictional standards and may be installed only with the approval of the engineer.
- B. Wayfinding. Where the jurisdiction has determined that a significant portion of business is from travelers, vacationers, or other strangers, that may require additional signage to enable potential

customers to find area businesses. The jurisdiction shall also determine that such uses are scattered on secondary roads rather than on arterials or collectors or concentrated in unincorporated places or corner locations. Such signs allow more efficient travel and lessen confusion.

- C. Place Signs. These are used for historical or cultural locations deemed important to the jurisdiction, county, state, or federal governments, where directional or explanatory signs are needed.

Section 9.402 Highway Signs

All signs for speed limits, traffic control, hazard and other warnings, route designations, or places of interest shall be placed in the public right-of-way only by the department of transportation or engineer of the government controlling the local, county, state, or federal roads. They shall meet the standards of those agencies. The jurisdiction may display seasonal or event banners that it has acquired for that purpose.

Section 9.403 Street Name Signs

Local street name signs shall have a minimum letter size of six inches. The following rules govern signs for collector, arterial, and limited-access roads.

- A. Signalized Intersections. Where there is a signalized intersection, a highway sign indicating the intersecting road shall be located at least 300 feet from the intersection.
- B. Limited Access. Road names and route numbers shall be displayed at the turn and 1,320 feet from the turn, or as per state specification.

Section 9.404 Mandatory Address Signs

All properties shall have an address sign placed as indicated in this section. The following rules apply.

- A. Residential Address Signs in Unincorporated Areas. The address sign shall be at the right-of-way line at the drive entrance. It shall be no more than two square foot in area, consisting of white letters on a dark green background or a color specified by the local fire department or jurisdiction. The address shall be in three-inch letters in accordance with the standard locational grid, and street name and township, if applicable, shall be on the sign in 1.5 inch letters. The number shall also be located on the mailbox with two-inch letters.
- B. Residential Address Signs in Municipal Areas. The address number shall be mounted on mailboxes in letters two inches high. Where there are no mailboxes on the street, the address sign may be located on the lot at the street or the building. If on the lot, the address sign shall be a minimum of one square foot and located so as to be no more than two feet from the right-of-way line. House-mounted signs shall be as follows. Where the house is less than 15 feet from the right-of-way, two-inch letters shall be used. Up to 25 feet from the right-of-way, four-inch letters are required. Homes more than 25 feet from the right-of-way shall not mount the address sign on the building.
- C. Nonresidential Address Signs. All nonresidential uses shall have signs, with font and size based on speed limits. Where the use has a freestanding sign, the address shall be located thereon. It shall be located on the façade of buildings no more than 20 feet from the curb line, and/or on address signs at the right-of-way line. The minimum height is indicated below.
 - 1. Speed Limit of 25 mph or Less. Numbers on buildings at least eight inches high, or six inches high on freestanding address signs.

2. Speed Limit 30–35 mph. Numbers on building 10 inches high, and eight inches high on freestanding address signs.
 3. Speed Limit Greater than 35 mph. Addresses shall be on freestanding address signs with letters at least 12 inches high.
- D. Freestanding Address Signs. The jurisdiction shall define the size and color of address signs to be used in the jurisdiction based on the minimum letter size and maximum length of address numbers.

Section 9.405 Wayfinding Signs

These are signs permitted within the public right-of-way that are intended to encourage visitors to find commercial uses or other destinations and must meet the standards of this section. The jurisdiction has determined, as indicated in Section 9.401B, that there is a need for wayfinding signs that enable visitors to find destinations and to enhance business at local establishments.

Section 9.406 Application for Wayfinding Signs

Owners of restaurants, resorts, campgrounds, motels, hotels, inns, or art and craft galleries may apply to the planning director for wayfinding signs. The application shall provide the following information.

- A. Owner information, including name of owner, name of business, address and fire number of business, owner's address if different from business, and phone, email, and other information for communication.
- B. Type of business and copies of any required licenses.
- C. Proposed sign plan showing the location of all signs in conformance with Section 9.407.
- D. Map of area proposed for signage.

Section 9.407 Placement of Wayfinding Signs

Each business located on arterial or collector streets, in unincorporated places, or crossroads with several such uses may submit a wayfinding sign proposal. The following rules govern the approval of the placement of signs.

- A. Number of Approaches. Up to three approach routes are permitted, beginning on the major arterial road nearest the site that leads to the site from opposite directions. For example, a use located on a north-south road could have signs on a northern and southern approach from a major road. A third approach could be from the nearest east or west. {Note} The directions could be reversed to east-west with two approaches and north-south with one. {/Note}
- B. Route. Each approach shall have a specific route selected. That is based on a minimum number of turns and using larger, more heavily traveled roads.
- C. Number of Signs. In general, the fewer signs, the better. Signs are required where there are turning movements and long travel distances on secondary roads will be discouraged.

Section 9.408 Approval of Wayfinding Sign Plan

The planning director shall review the approach plan and routes. The planning director may modify the plan to achieve the following conditions.

- A. Routes. Where there are multiple routes proposed, the planning director may consolidate them to provide the most efficient route with the fewest signs. Where there are generally parallel or similar routes, one shall be eliminated.
- B. Approaches. The planning director shall consider concentrations of potential clients in evaluating the possible approaches and create combined approach routes where possible.

Section 9.409 Wayfinding Sign Size

The wayfinding sign shall be no more than five square feet. The sign shall contain only the name and/or symbol of the business. Where two or more businesses share signage, the sign area may be expanded to 10 square feet with both signs on a single mount. No extra information other than an arrow indicating the direction of a turn is permitted.

Section 9.410 Mile Marker Signs

There are two alternative sign strategies for wayfinding signs that have an organizational structure. In both cases, the jurisdiction shall develop a system for the signs, either mile marker or place signs.

- A. Mile Marker Signs. Mile marker signs are to be approved where there is a single major arterial road and most businesses are located along a strip that is at least 20 miles long. Businesses are encouraged to advertise their mile marker location, which allows travelers to know when they are near their objective. The jurisdiction shall provide a map of the corridor with mile marker distances mapped. The jurisdiction shall provide a template for mile marker sign design and construction. Signs are limited to eight square feet in area and no more than nine feet in height. The location of the sign shall be approved by the engineer as being a safe location in the right-of-way as close as is practical to the actual mile point. If the jurisdiction does not install the markers, landowners or local business groups may erect mile markers at locations on the right-of-way as approved by the engineer.
- B. Place Signs. Where businesses are concentrated in unincorporated places or crossroads that are on minor roads, signs with a maximum size of four square feet shall be placed on jurisdiction roads to direct visitors to those places that are not on major roads. The jurisdiction shall design such signs with a consistent color and font. The planning director and engineer shall identify locations where they are needed. The jurisdiction may install such signs.

ARTICLE 10 MODULATION

DIVISION 10.100 PURPOSE

This article's purpose is to reduce the need for variances to a minimum. It identifies conditions in which regulations may be modulated in order to provide greater flexibility in meeting developmental needs. The planning director, after determining that the necessary conditions in this article are present on-site, is authorized to modulate the regulations to permit development which would otherwise be prohibited by a rigid standard.

- A. Modulation. Modulation is an administrative process that identifies a rigid regulation which could, in specific conditions, result in an undesirable denial of development. When such conditions are present, the planning director is authorized to modulate the regulation as it applies to that property.
- B. Flexibility. There are standards in place to prohibit actions that are generally undesirable but, in selected conditions, are desirable. Modulation provides a process whereby the planning director has the flexibility to approve a design standard that provides the desired results.
- C. Approval. The planning director is authorized to approve modulations in limited situations as indicated in this article when specific conditions are met.
- D. Type of Modulation. Zoning is addressed in Division 10.200. Subdivision and land development regulations are addressed in Division 10.300.
- E. Pattern Book. Flexibility in zoning and design for larger-scale developments is provided for through pattern book approval. The pattern book allows for flexibility to modulate standards when a subdivision plat or land development plan illustrates, through detailed architectural and landscape design, that the modulations provide a cohesive design, character, and quality development. In return, the developer is legally bound to build in accordance with the approved site plan, architectural and landscape design.

DIVISION 10.200 ZONING MODULATION

Section 10.201 Application

A zoning modulation may be requested by the developer, or the planning director may recommend the modulation to improve a site plan. There are also provisions in Division 11.600 where more detailed design regulations require a zoning modulation. The following sections represent specific modulations.

Section 10.202 Building Pads

The residential lot and bulk requirements (Division 4.200) use street, rear, or side setbacks that define where a building must be placed on a lot. This makes an organic design or the preservation of resources such as mature trees on larger lots difficult. When resources are within the buildable area, the setbacks may be replaced by a building pad. Figure 10.202 shows building pads contrasted with setbacks. The pad may be approved subject to the following requirements.

- A. Conditions. One of the following conditions is required in order to use building pads.

1. Resource Preservation. Healthy trees or other resources can be preserved by modifying the area on which the building can be constructed. OR
 2. In the Estate (E) or Suburban (S) districts, the design of a development would be enhanced by varied street yards in order to preserve vegetation, respect topography, or create a more organic development.
- B. Standards. The following standards must be met by the building pads.
1. Side yards shall not be less than five feet wide unless pads on adjoining lots maintain a ten-foot building separation.
 2. Street and rear yards shall be cut by no more than 50 percent.
 3. The pad may be irregularly shaped to better preserve buildable areas while protecting trees or other site features.
- C. Streetscape. In the E or S districts, a more organic design may be achieved by using a building pad with individualized setbacks and preserving site features, on lots of 12,000 square feet or more. Building pads are shown of each lot taking into account the vegetation on the lot. Different setbacks may be used to enhance the preserved vegetation and create a more organic character.
- D. Area. All building pads are limited to an area no greater than that within the setback lines, as indicated in Sections 10.203 and 10.204. Figure 10.202 shows lots with areas within the setback lines in yellow and building pads in orange. Smaller pad areas are permitted when the developer agrees to the reduced area.

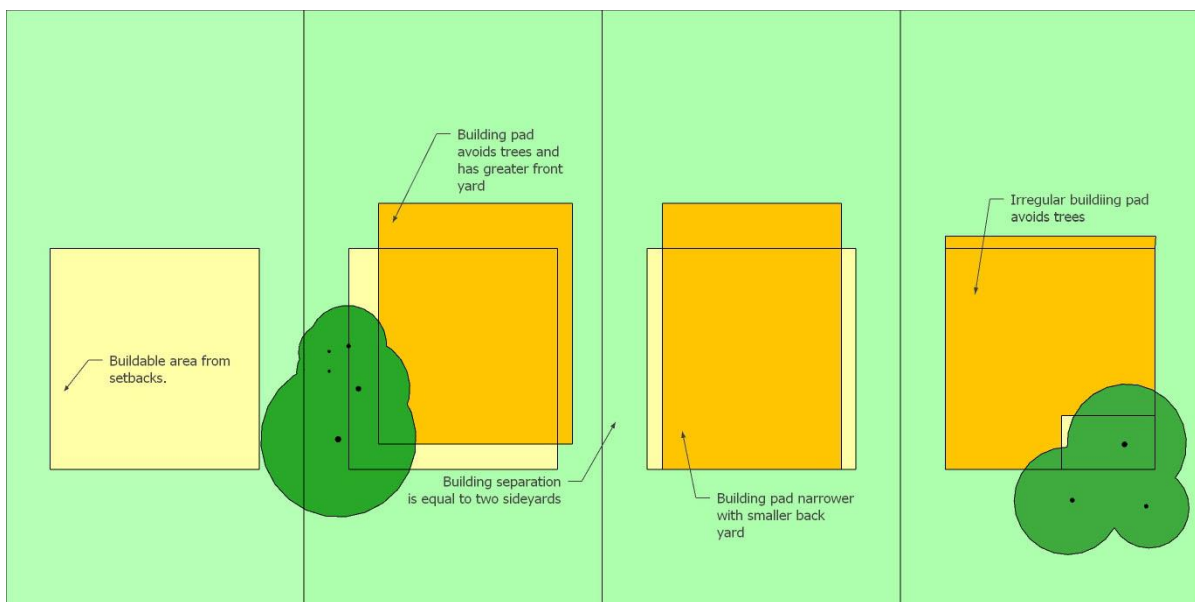


Figure 10.202 Building pads replace buildable area defined by setbacks

10.203 Urban Residential Street Setback

The residential setback in urban districts is normally set at 10 feet but could be adjusted to between 0 and 15 feet. Modulation allows a change to a highly enclosing character with no setback, as shown in Figure 10.203 for townhouses. A proposed modulation requires the submission of a pattern book. The following requirements shall apply.

- A. Total Yard Area. The total yard area shall not be decreased to allow a larger building footprint.

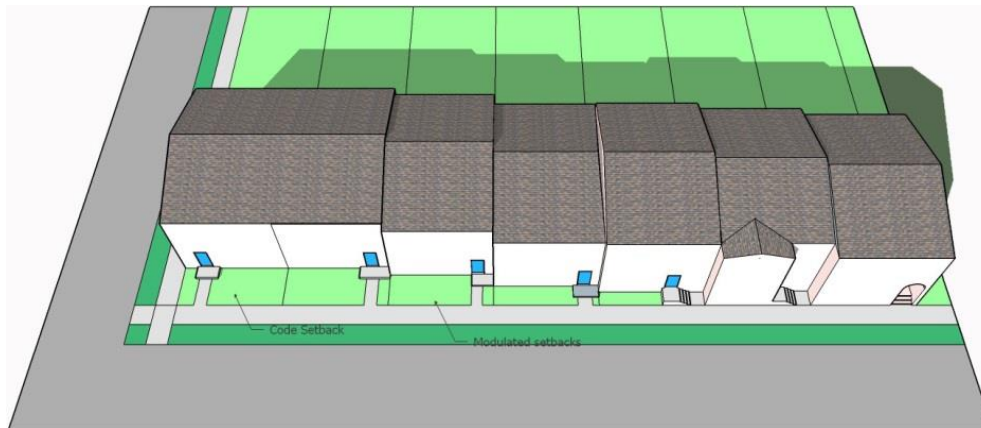


Figure 10.203 Modulation of street setbacks

- B. Location. Such a modulation shall be permitted to create a more enclosing street or where a transition from residential to a commercial urban area is desired. It shall not be permitted facing similar units that meet the ordinance.
- C. Floor Elevation. Where the unit is set back less than five feet, the first floor shall be at least two feet above the sidewalk to enhance privacy. The façade shall provide for stairs and landing in the street yard or entry.
- D. Purpose. The design purpose of the modulation with respect to character shall be identified by the developer. The planning director shall approve the modulation after considering the development, neighboring uses, and whether the modulation improves the design.
- E. Monotony. Setbacks in townhouse types are a way to reduce monotony (Section 11.603) and may be combined with an increase in height in modulating to eliminate monotony.

Section 10.204 Urban Nonresidential Build-To Line

The urban build-to line (Section 4.404) requires that buildings are built to the sidewalk line. Figure 10.204 illustrates exceptions. The setback may be increased pursuant to the standards of this section.

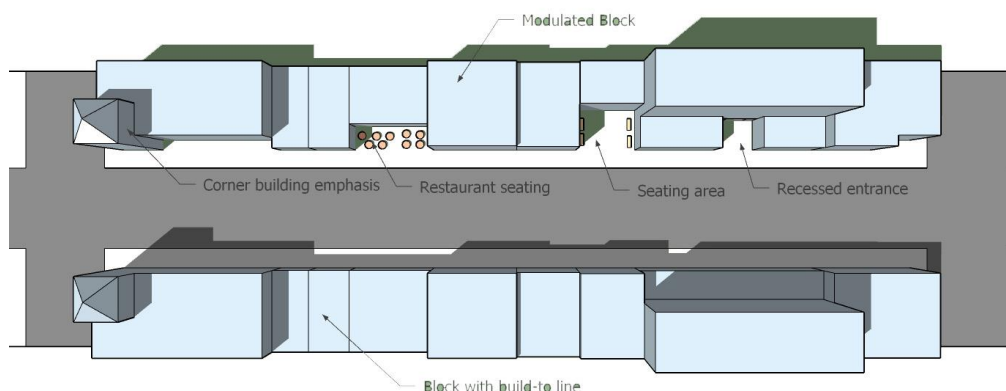


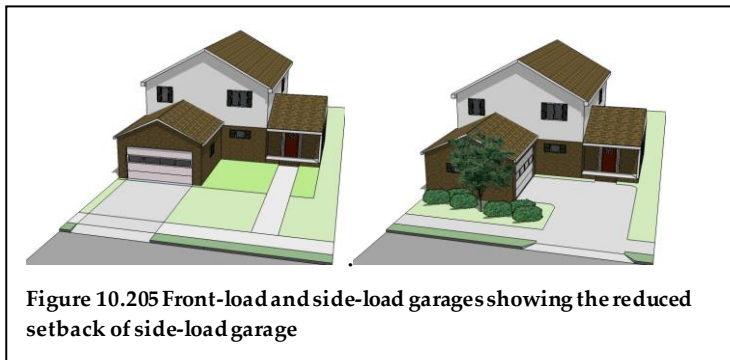
Figure 10.204 Block with build-to line below and modulated setbacks above

- A. Restaurants. Where a lot on a block or a portion of a building block is designated for a restaurant, the setback may be increased to specifically permit outdoor restaurant seating. A plan shall show the proposed seating. A railing or planter may be required to separate the area from foot traffic.
- B. Transit Stop. Where the jurisdiction desires a transit stop, the build-to line shall be configured to permit a full sidewalk width between the transit shelter and the building.
- C. Space. Portions of a block may be set back for public seating, landscaping, art, outdoor display areas, or building entrances. Public space for art, performance, or other purposes may be created by increased setbacks.
- D. Kiosks. Where the design specifies kiosks as part of the development streetscape, the setback may be increased to permit the kiosks while retaining the effective sidewalk width for pedestrians.
- E. Design Emphasis. Where the design seeks to articulate the building façade by breaking into multiple planes at corners, or major entrances, increased setbacks may be permitted.
- F. Approval. A pattern book with a detailed explanation of design objectives shall be submitted for approval.

Section 10.205 Side-Load Front Garages

In the Suburban (S) or Auto-Urban (AU) districts, street setbacks are designed to provide at least a 20-foot setback from the garage to the street right-of-way. This allows a car to park in front of the garage without intruding into the public sidewalk. On small lots, this creates an undesirable façade dominated by a garage with a reduced lawn area. Side-load front garages rotate the garage so that a right or left turn is required to enter the garage, permitting a reduced setback. Side-load garages shall meet the following requirements.

- A. Access. The garage shall be accessed by a 90-degree turn from the street.
- B. Windows. The garage façade facing the street shall contain at least two windows of similar size and sill height to the windows in the house's street façade.
- C. Landscaping. Additional landscaping shall be planted between the garage and the street, consisting of six shrubs and one understory tree in auto-urban areas. In suburban areas, 0.6 of a plant unit and at least one canopy tree shall be required.
- D. Lot Width. A minimum lot width is required in order to permit cars to make the turn and to maintain the lawn against the adjoining property. In auto-urban areas, the minimum is 55 feet and in suburban areas, 60 feet.
- E. Street Setback. In the AU district, the garage setback is reduced to 10 feet. For the S district, the street setback may be reduced to 12 feet or 50 percent of the standard in Sections 4.203 and 4.204, whichever is greater.



Section 10.206 Rear Garages

Rear garages offer an ability to retain or promote an urban character where access to the garage via alley is not feasible. The rear garage requires a greater side yard to get the car to the rear. The following standards shall be met.

- A. Street Yards. The street yard setback shall be reduced to 10 feet.
- B. Side Lot Setback. The total side yard setback shall be modified to retain the minimum side yard on one side and be increased to 14 feet on the other side to provide a driveway with grass on either side. Where two lots have abutting driveways, the side yard is reduced to 13 feet with three feet of grass abutting the dwelling.
- C. Garage Setback. The garage shall have a minimum yard of three feet in the rear or on the side, except where the plat calls for attached garages, eliminating the side yard setback.
- D. Lot Width. Lot width shall be a minimum for the single-family type selected from Section 4.203. The planning director is authorized to increase minimum frontages while maintaining lot area and the maximum building coverages.
- E. Rear Yard. There shall be a minimum of 30 feet from the rear of the dwelling to the garage.
- F. Easement. Where garages have a common wall or abutting driveways, there shall be a cross-easement on the drives of both units.

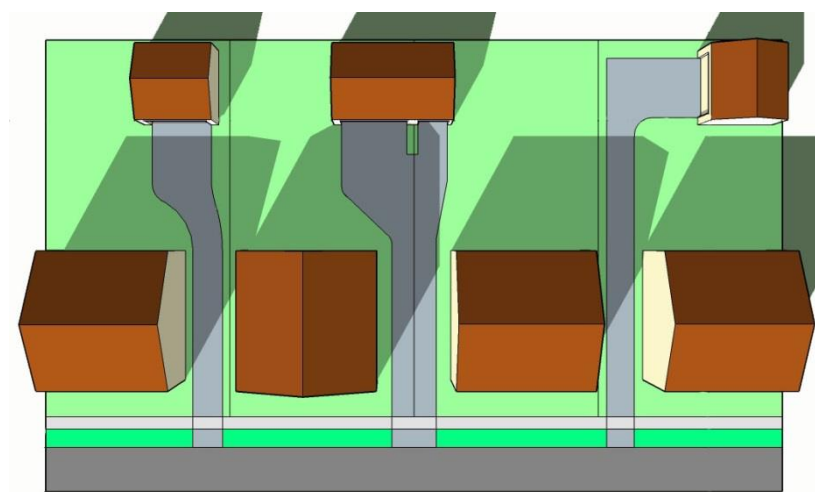


Figure 10.206 Urban rear garage mitigation

- G. Suburban (S) District. In S districts, rear garages shall have five-foot rear and side yard setbacks. The side yard with the drive shall provide a 12-foot driveway, three feet of grass against the dwelling, and five feet between the adjoining lots.

Section 10.207 Recessed Street-Facing Garages

In AU districts, the street setback may be modified to a minimum of 12 feet where a front-load garage is recessed behind the street façade of the house to provide a more urban character.

- A. Garage Recess. One-car garages shall be recessed at least 12 feet behind the front façade. Two-car garages must be recessed at least 18 feet (Figure 10.207).

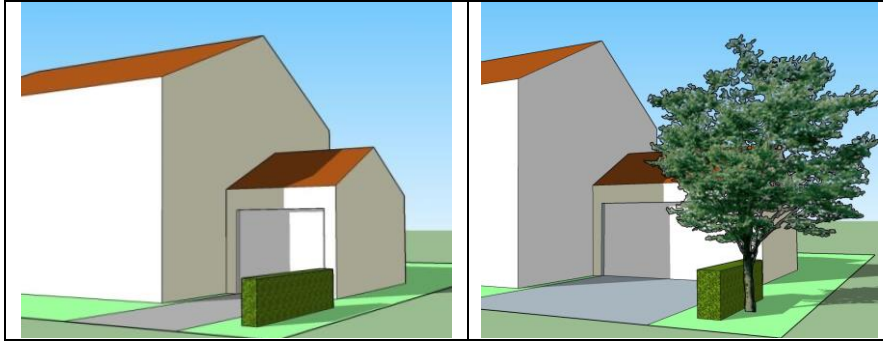


Figure 10.207 One- and two-car recessed garages with landscaping

- B. Lot Width. Lots shall be a minimum of 50 feet in width for one-car recessed garages and 60 feet for two-car garages.
- C. Landscaping. A hedge shall be planted four feet from the street property line, running back to within three feet of the garage face. The hedge shall be maintained at a minimum height of four feet. With two-car garages, one canopy tree shall be planted next to the hedge.

Section 10.208 Off-Site Garages or Parking

For very small lot units, single-family, two-family, or attached housing types, common parking areas may be provided in lieu of on-lot parking. Where common parking is approved, the minimum lot area specified in Division 4.200 shall be reduced by 120 square feet. Street and side yards shall meet the minimum and the rear yard may be reduced to allow for the lot-area reduction.

Section 10.209 Walled Yards

Atrium and patio houses are required to have yards enclosed by a wall. Where the wall faces common open space that is at least 30 feet in width, the wall area may be reduced in height and/or length by 30 percent to provide a view of open space. If the open space is a woodland, the area may be reduced by 50 percent.

Section 10.210 Building Length

The length of all townhouse building types and atrium units is limited (Sections 4.208–4.212). There are three building configurations where an increased number of units are permitted: circle, crescent, and S-curve where the configuration would be less effective if broken into separate buildings (crescent configuration is illustrated in Figure 10.210). Small sites may also be granted greater length in accordance with D below.

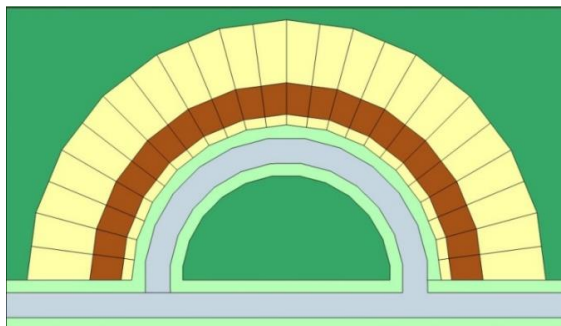


Figure 10.210 Moderation of building length for crescent design

- A. Design Modulation. Where the modulation is based on design forms, pattern book approval is required (Division 12.500).
- B. Alternative Plan. The submission for pattern book approval shall include the proposed unbroken design and an alternative with ten-foot fire breaks every 400 feet.
- C. Alleys. To gain approval of modulation, the building must have alley and street frontage. The fire marshal may require more on-street hydrants and/or hydrants in alleys to provide the same coverage as buildings that meet the required length.
- D. Small Sites. Where the maximum length requires two buildings on a site, a single building with up to 11 units may be permitted so that only a single building is built.

Section 10.211 Stepped Multifamily

The standards for stepped multifamily structures (Section 4.218) are based on an average dwelling-unit floor area of 1,400 square feet. Smaller or larger units may be encouraged. While this will not impact the yard and other requirements, it will impact the maximum floor area ratio (FAR) and required parking area within the structure. A developer shall submit a plan including unit floor plans. The planning director, after examining the plan, may approve a different average dwelling unit size and FAR, provided all other standards are met. Affordable units are to be encouraged.

Section 10.212 Building Height - Setbacks

For multifamily, mixed-use, or nonresidential structures where designs require either vertical or horizontal setbacks to avoid monotonous, blocky buildings, the planning director shall modulate the maximum height after reviewing plans and calculations showing that extra stories are required to achieve the FAR permitted in the district. The permissible height shall be increased by the height of each additional story. The height standards shall provide for roof design, so that the increase accounts for only the additional story or stories required to reach the maximum permitted floor area.

Section 10.213 Underground Parking

In the S and AU districts, underground parking reduces the portion of the site needed for parking. This is desirable, as an increase in floor area should help offset the added cost to the developer for underground parking. The planning director may permit the higher FAR where the following conditions are met.

- A. Below-Ground Parking. All the required on-site parking shall be located below ground and contained within the lot. A parking area on the surface for up to 12 cars shall be permitted for visitors.
- B. Structure. Subsurface parking shall be located at least five feet from any property line. The parking structure shall be covered with an average of three feet of soil with a minimum cover of one foot. At the low point along a street, the surface shall be no more than six feet above grade.
- C. Landscaping. The parking structure shall be planted with grass and other ground covers and five plant units per acre. Irrigation may be required by the arborist.
- D. Floor Area. The maximum permitted floor area shall be increased by allowing the building's footprint to be enlarged. The increase shall be up to 10 percent for suburban and 15 percent for auto-urban areas. The total required parking area will also increase as total floor area increases. The increased footprint multiplied by the permitted stories determines the new maximum floor area.

Section 10.214 Street Frontage

The street frontage requirement is intended to ensure automobile access via a street yard. It may be reduced or eliminated under the following conditions.

- A. Mews. Where units front a pedestrian mews and have automobile access via an alley, no individual street access shall be required. The frontage is then used to provide a minimum lot width.
- B. Block Townhouses. These units have structured or underground parking and units in the interior of a block have access only from a pedestrian precinct or the parking below. Frontage for the interior units is then used to provide a minimum lot width where lots face the pedestrian precinct.
- C. Mixed Uses. Where townhouse or atrium homes are built on upper levels of mixed-use buildings, the street level of the building serves as the street frontage and access. Frontage is therefore used to provide a minimum lot width on those upper levels.

Section 10.215 Flag Lots

Flag lots are generally prohibited due to historical abuses where flag lots were used to avoid building streets and buildings difficult to reach by fire or emergency services. There are situations where a flag lot or irregular lot can protect the environment, eliminate curb cuts on major roads, or increase efficiency (Figure 10.215). The planning director may approve flag lots that meet the following requirements.

- A. Flag Lot Rows. Flag lots that result in a second row of lots behind lots with proper frontage on a road are prohibited.
- B. Increased Efficiency. Normal pie-shaped lots used on cul-de-sacs are inefficient as lots are larger. Irregular lots that would be considered flag lots due to frontage (tan in Figure 10.215) shall be permitted, provided the lot width at the building pad meets the frontage standard of the housing type or lot size. This is permitted in order to allow maximum density to be achieved or more open space to be provided.
- C. Environment. Where there is a resource like woodlands that needs protection and it can be shown that several flag lots can be used to protect more of the resource than an extension of the cul-de-sac proper, then flag lots (orange on Figure 10.215) shall be permitted.
- D. Collector/Arterial Access. A flag lot may be permitted from an interior street to avoid having it take access to a collector or arterial street (dark red on Figure 10.215).

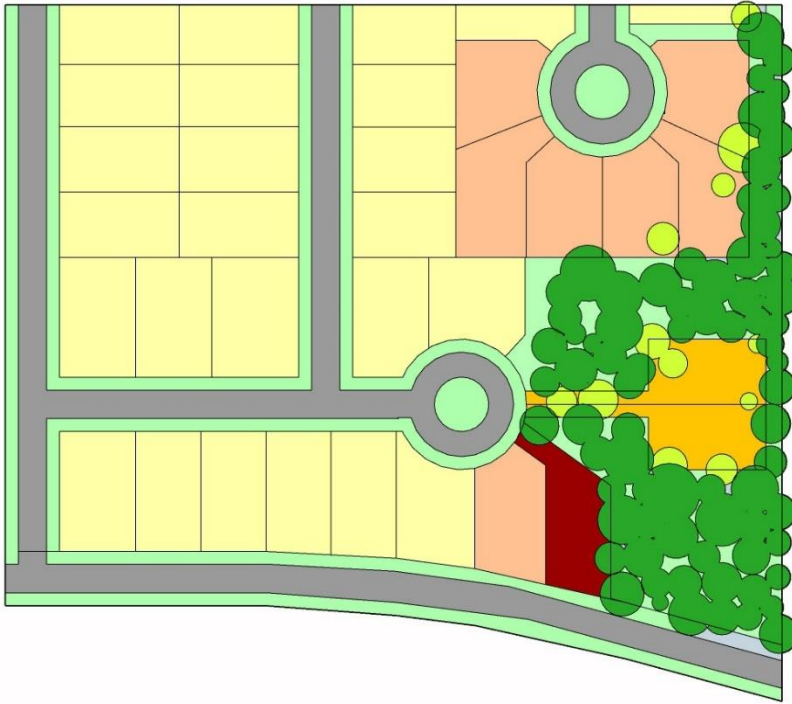


Figure 10.215 Permitted flag lot usage

- E. **Parcel Shape.** Where the shape of the parcel limits density by prohibiting additional lots of minimum area because of inadequate frontage, one flag lot may be permitted, provided the planning director finds that there is enough land for an additional lot but not enough land for a cul-de-sac to serve that lot.
- F. **Frontage.** The lot shall have at least 16 feet of frontage on a generally straight street and 20 feet on cul-de-sacs. There shall be a rectangular or trapezoidal shape on the lot that meets 90 percent of the minimum lot area.

Section 10.216 Plant Size

Plant size reductions are permitted in two instances. The first occurs when the jurisdiction's arborist finds that bag-grown plants will grow to equal or larger stature than balled and burlapped trees five years after planting. The second occurs in large-scale developments taking more than 10 years to complete. Smaller trees may be planted at the beginning of the development because they will have grown to be larger than trees newly planted trees in the latter phases. The planning director shall permit smaller trees for open space and bufferyards, provided all such trees shall be planted in the first phase of development. The following standards must be met in order to qualify for the reduction.

- A. **Bag-Grown Trees.** Bag-grown trees may be substituted for 90 percent of the required trees, and 10 percent of the trees shall be 1-inch caliper larger than that required by Table 8.103. The bag-grown canopy, evergreens, or understory trees shall have the following sizes: 1.75-inch caliper canopy, five-foot evergreen, and 1-inch caliper understory.

- B. Large Developments. All buffer or open space plantings in the first three years of development shall be full-sized. Where all the trees for the remaining phases of open space or bufferyards are planted during the first three years, smaller plant stock shall be planted for years four through ten or later.
- C. Maintenance. Smaller plants shall be maintained for five years.

Section 10.217 Bufferyard Plantings

The plant requirement per 100 feet of bufferyard may be modulated by the planning director after review of existing, adjoining developments' building setbacks, existing vegetation, and bufferyards. The director may allow averaging of the planting to redistribute some of the plant material in order to provide better overall buffer protection, given neighboring uses and existing vegetation or topography.

Section 10.218 Affordable Housing

The planning director is authorized to modulate standards to ensure no regulation limits the ability of the developer to provide the required percentage of affordable housing or creates an unrealistic price for the affordable units.

- A. Minimum Number of Housing Types. Table 4.105 provides a minimum number of housing types in larger developments. The planning director may require an additional housing type in order to provide affordable housing and may direct the use of a type not proposed to ensure the unit type will be more affordable.
- B. Minimum Percent of Housing Types. Table 4.105 requires a minimum and maximum percentage of any housing type. The planning director may require an additional type or modulate the percentages in order to provide more affordable housing.
- C. Unit Size in Multifamily or Mixed-Use Housing. This is regulated by Section 4.104, which provides a minimum floor area and a mix of bedroom types. The planning director may modify the percentage of each type if the housing agency indicates it better meets the jurisdiction's needs. The square footages may be modified where reductions permit units to be made more affordable.
- D. Small-Family Units. Small-family units are not a normal part of the development mix. Where the planning director, in consultation with the housing agency, determines that such units are needed to meet the affordable housing requirements, they shall be used for affordable units and the gross density of the site shall be increased. The substitution of a small-family unit for an affordable unit with multiple bedrooms shall be permitted, provided two small-family units are substituted for each larger unit, increasing density and the total number of affordable units.

Section 10.219 Unit Mix

The planning director may alter percentages of small or average unit size or the number of unit types when he finds, due to rounding, that the number of small units would result in a very different mix. The planning director is allowed to use normal rounding in determining the number of affordable units.

Section 10.220 Historic Preservation

The planning director is authorized to change the intensity of a lot or parcel, or change the use permitted, subject to meeting the provisions of Division 6.400 for such a change.

Section 10.221 Minimum Resource Protection

Sites may have many natural resources. In many cases, woodlands also exist in riparian buffers, on steep slopes, and in other protected areas. It is desirable to protect the most valuable resources. The planning director is authorized to permit the cutting of an additional acre of an individual resource protection area, where offset by preserving an acre of a resource requiring more protection, as follows.

- A. Edge Woodlands. Allow more disturbance of edge woodland when offset by preserving additional acres of core woodlands.
- B. Slopes. Allow more disturbance of 15–25 percent slopes when offset by preserving additional acres of slopes greater than 25 percent.
- C. Slope and Woodland or Savannah. When the protection level of edge woodlands or savannah is less than a slope category that is covered by a woodland or savannah, the planning director may allow more disturbance of the edge woodland when offset by greater protection of a slope that is also woodland or savannah.
- D. Health. The urban forester shall inspect the health of woodlands or savannah before the changes are permitted. Additional areas to be protected shall be found in good health and free of infestation (by emerald ash borer, for example) or low-quality or invasive plant species. The urban forester shall identify areas of poor health, poor quality, or presence of invasives, and these areas should be the ones cleared instead of areas of healthy trees.

Section 10.222 Parking Structure FAR Adjustment

The maximum FARs for nonresidential and mixed-use structures in the E, S, AU districts, and hamlets or villages is based on parking being at grade. The planning director has authority to recalculate the maximum floor area in these districts to determine the reduction of the amount of the site that needs to be devoted to parking, based on the number of floors in the structured parking. The land unused for parking shall be used to determine the new floor area achievable at the maximum height permitted in the district.

DIVISION 10.300 SUBDIVISION MODULATION

Section 10.301 Purpose

The subdivision standards, transportation, and infrastructure (Articles 11, 12, and 13) set forth ideal site planning criteria and construction standards. Since subdivision standards must be applied to real sites in an existing context, modulation to deal with on-site conditions is authorized. The standards apply to roads, sewers, storm water management, and fire prevention systems where, ultimately, the jurisdiction's engineers, fire officials, and police must ensure that these systems operate in the safest and most efficient way feasible on that site. There must be a means of ensuring that developments proceed in recognition of the realities of the site and existing infrastructure.

Section 10.302 Initiation

A subdivision modulation may be requested by the developer, or the planning director, engineer, fire marshal, or police may recommend it during the subdivision review process.

Section 10.303 Modulation Prohibited

In granting a modulation, the modulation may not reduce a critical standard such as water pressure, water flow rates, structural integrity of roads, sidewalks, sewer or water lines, or storm water storage or release rates.

Section 10.304 Utility Modulation

The jurisdiction's standards for utility construction may be modulated. Modulation shall be approved when there is no degradation of the performance of the utility or increase in risk of property damage or safety associated with the alternative design. The department in charge of reviewing the engineering or safety of the element for which a modulation is requested shall review and approve it, subject to the following requirements.

- A. Performance. The alternative design functions as well or better than that required, and the modulation provides the required level of service.
- B. Safety. If the risk of damage to public or private property is greater under the alternative design than a design using the current regulations, the modulation shall be denied.
- C. Maintenance. If the proposal would result in significantly higher maintenance costs or difficulty of repair, the modulation may be denied.
- D. System. If the proposal would create problems that the jurisdiction would have to correct elsewhere in the system, the modulation shall be denied unless the developer is paying for all off-site modifications.
- E. Written Report. The relevant department shall indicate in writing why it is approving or denying the modulation. The report shall identify the reason that it finds the modulation to represent a safe and efficient engineering solution that equals or exceeds the current standard or fails to do so.

Section 10.305 Street Intersections

Where there are T intersections of streets, there is a minimum offset between intersections. This may be modulated where the planning director, in conjunction with the engineer, finds the subdivision's dimensions are such that the standard cannot be met except by losing lots. It shall be denied only where the engineer has found that the configuration is unsafe due to alignment (horizontal and vertical sight distances) and speeds.

Section 10.306 Street Width

In areas of steep slope or unstable soils, the street width may be modified at the developer's or jurisdiction's request.

- A. Narrower Rights-of-Way. The narrowing of rights-of-way and pavement shall be permitted where this reduces the amount of cut and fill required. The narrower right-of-way may permit a sidewalk on one side instead of both sides or eliminate sidewalks where a trail through open space can serve the same function. Parking may be prohibited, and speed limits may be reduced to narrow the right-of-way.
- B. Structural Elements. Where special design features are needed to stabilize the roads, they may be required, and rights-of-way changed to accommodate them.

- C. One-Lane Bridges. One-lane bridges may be permitted on roads whose peak-hour traffic volume will not exceed 30 vehicles per hour, and the planning director finds there is a sufficient savings in the cost of the development.

Section 10.307 Urban Street Width

Urban streets serving commercial areas requiring a minimum of 10-foot sidewalks the right-of-way may be reduced where an entire block face is designed with a loggia, the right-of-way on that side of the street may be reduced where the following conditions are met. A reduction of the sidewalk in the right-of-way from 10 feet to three feet is permitted where the clear span of the loggia is 9 feet. This modulation is intended to increase the buildable area of the block. Figure 10.307 illustrates the concept. This modulation may only be used in the Urban (U), Urban Mid-Rise (UM), and Urban Core (UC) districts where buildings are at least three stories high. This can be applied to either a street face where one street is reduced in width, or to an entire block where three or four streets are impacted.

{Sidebar}

Example: A block is 300 by 600 feet with 80-foot right-of-way. A four-story building without loggia has a ground floor of 180,000 sf and total floor area of 720,000 sf. If only one block face is addressed, the sidewalk is reduced from 10 feet to three feet, resulting in a block that is 307 feet wide. The first floor area is only 178,800 sf. The upper floor is 184,800 sf. A four-story block with loggia has 533,200 sf. This is an increase of 1.8 percent. Taller buildings produce a greater increase in floor area and efficiency.

{/Sidebar}



Figure 10.307 Narrowed sidewalk and right-of-way in combination with a loggia allow for increased total floor area even though there is a reduction on ground floor

Section 10.308 Parking Spaces

Parking Spaces in Section 13.507 are designed for full-sized cars, SUVs, and small trucks. The planning director is authorized to increase or decrease the size of a stall from the standard 10-foot width and 18 to 20.5 feet length to accommodate compact or subcompact cars. A portion of a parking lot or parking structure may be reserved for smaller vehicles. An intermediate space for subcompact of nine feet by 16 feet is permitted. For the smallest cars, widths of eight feet and lengths of 13 to 14 feet may be permitted. The planning director shall require or conduct a study of motor vehicle ownership in the jurisdiction to determine the percentage of small vehicles. In jurisdictions where there is a high percentage of trucks and SUVs, the planning director may require a 10.5-foot width for parking stalls. Enforcement shall be by cameras or regular patrol to ensure compliance with the type of cars using the spaces, as there is a history of larger vehicles regularly squeezing into spaces reserved for small vehicles.

ARTICLE 11 DESIGN

DIVISION 11.100 PURPOSE

The purpose of this division is to provide regulations that enhance the design of development types that are more complicated than the typical subdivision or land development. Division 11.200 deals with hamlets and villages and also addresses other rural and phased developments. Division 11.300 provides alternative design approaches for auto-urban development. Division 11.400 provides the regulations for offset pedestrian and street systems in urban areas. Division 11.500 provides for grade-separated pedestrian precincts for entire areas or transit-oriented development. Division 11.600 addresses design concerns regarding monotony and scale in residential development. Harmony and diversity in the design of nonresidential areas are covered in Division 11.700.

DIVISION 11.200 RURAL DESIGN TYPES

Section 11.201 Purpose

There are some development types that are intended to create rural communities that have both residential and nonresidential elements and protect surrounding rural land, development types for rural land allow for interim development. Hamlets and villages are rural development forms that are complete rural communities. Interim types allow limited development of rural land prior to the time the jurisdiction can make utilities available to support the desired long-term character.

Section 11.202 Hamlets and Villages

Hamlets and villages are rural communities surrounded by large areas of open space. The open space is either part of the development or otherwise secured as permanent open space. Villages are the size of neighborhoods and have an internal population to support commercial uses. The hamlet is smaller and lacks the population to support significant retail. As such, their design requirements differ.

- A. Hamlet. Each hamlet shall be composed of a hamlet development area and common hamlet open space (Figure 11.202). Hamlets may include a hamlet center that includes vertically mixed-use buildings, nonresidential buildings, and open space. Some of the open space may be noncontiguous. The figure shows some residential out-lots that were never acquired and may be surrounded by hamlet land.

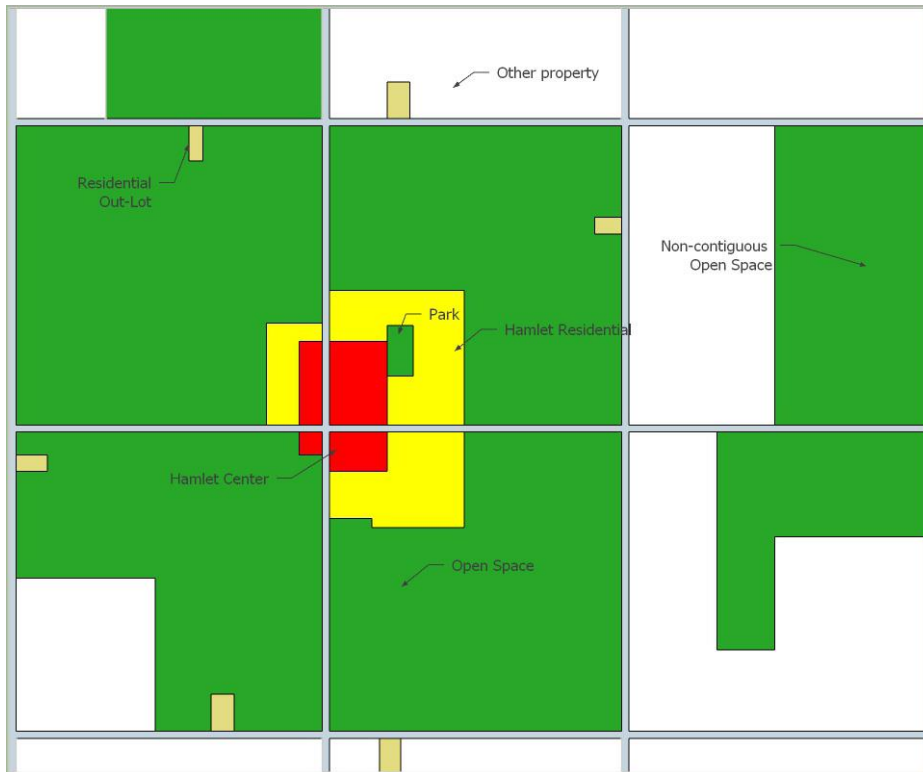


Figure 11.202 Hamlet or village design

- B. Villages. Villages follow the same arrangement as hamlets (Figure 11.202) with a village development area surrounded by rural open space. The village must have a village center that provides a community center and commercial area. The village may have several residential areas. In certain circumstances, an employment area with office or industrial employment may be desirable in the largest villages.

Section 11.203 Hamlet and Village Components

The following are the components of hamlets and villages. Most are common to both.

- A. Hamlet or Village Development Area. The development area contains all the development that is permitted by Article 2, Land Uses, and Article 3, District and Bulk Standards. The hamlet development area may be subdivided into two components: residential areas and an optional hamlet center. The village shall contain a village center, one or more residential areas, and may also have an employment area. Both hamlets and villages may include some open space for use by residents or for resource protection. The majority of the open space is devoted to farming or silviculture.
- B. Hamlet Center. A hamlet center is optional, because most hamlets have populations insufficient to support much commercial activity. The hamlet center may be a core generally surrounded by residential or may be on an edge where it serves traffic on a major road. The following uses must be located in the hamlet center if they are to be provided.
1. Commercial uses.
 2. Home work space, home business, or home industry.
 3. Institutional uses.
- C. Village Center. Villages shall have a village center that contains most commercial, office, and other uses, as well as mixed-use structures. Institutional uses may be in the center or residential areas. It shall

have a higher intensity of uses than the residential areas. It shall clearly be designed as a central place for the following village activities.

1. Commercial uses.
 2. Office uses.
 3. Mixed-use buildings.
 4. Home work space, home business, or home industry.
- D. Residential Areas. Most of the residential uses, except those in mixed-use buildings or farmsteads, shall be located in the residential area. Institutional uses may also be located in residential areas but are preferred to be located in the hamlet or village center.
- E. Employment Area. Villages may have an employment area for office and industry. Hamlets may have this use where rail access encourages agricultural or silviculture businesses that ship by rail.
- F. Common Internal Open Space. Within the development area, there shall be some common open space for the use of hamlet or village residents. This open space may be in the form of greens, parkways, parks, natural resource corridors, buffers, garden plots, or connectors as permitted below.
1. Greens. Greens are areas having a minimum of 20,000 square feet and minimum average width of 90 feet. These areas shall be for passive recreation, unstructured play, walking, and sitting. In general, they are surrounded by streets. No more than one-fifth of the perimeter of greens may adjoin rural open space.
 2. Parkway. Center parkways may be counted as open space where they have a minimum width of 12 feet. They may be used to provide a visual barrier, recreation space, or means of surface storm water conveyance.
 3. Parks. These are active recreational areas for hamlet or village residents. They may be tot lots, neighborhood parks, picnic areas, or ball or sports fields, but shall not be used for regional recreational programs. Hamlet or village open space is intended for the citizens' needs and preserving the rural economy so larger facilities serving a regional need should not be permitted.
 4. Natural Resource Areas or Corridors. Where resources are preserved in the hamlet development area, they shall be considered part of the hamlet open space.
 5. Fringe. Some common open space may be permitted in the rural areas for trails or buffer purposes.
 6. Garden Plots. A portion of the internal open space may be used for garden plots. This activity should be located on the outer edge of the development area.
 7. Connectors. Areas of common open space may be linked with green corridors for pedestrian, bicycle, equestrian, or stream corridors.
- G. Rural Open Space. Rural open space may include natural areas as well as agriculture or silviculture. Rural open space may be common or privately owned. The residence of the owner or manager of the rural open space is considered a farmstead and shall be counted as part of the rural open space. Further, the dwelling unit of the farmstead shall not count toward the hamlet or village density. Trails are encouraged in the rural open space to allow residents access to rural areas.

Section 11.204 Hamlet and Village Land Use

Hamlets and villages are both listed in Rural Tables 2.205A as land uses, and many uses indicated with an **L** are permitted only in hamlets or villages (Division 2.400).

Section 11.205 Noncontiguous Rural Open Space

In developing hamlets and villages, the ideal is to have all the rural open space contiguous. However, in recognition of scattered land-ownership patterns, up to 15 percent of the rural open space may be noncontiguous, provided it is no more than 1,320 feet from the nearest contiguous area for hamlets, and 2,640 feet in the case of a village. See Figure 11.202 for an illustration of noncontiguous open space.

Section 11.206 Buffer

The intent of the hamlet and village is that they are freestanding communities. In general, they should disappear into the landscape unless one is driving through their centers. Rural bufferyard standards (Section 8.306) apply to rural land between nearby collector or arterial roads or in adjacent residential areas. Where a road runs through a hamlet or village center, it shall be at least 660 feet from any boundary of the development to preserve a sharp rural edge.

Section 11.207 Approval

All hamlets and villages shall be approved with a pattern book plan.

Section 11.208 Rural Subdivisions

Rural subdivisions permit owners in the Countryside (CS), Agriculture (AG), or Natural (N) district to subdivide a few lots (B below) without submitting a detailed subdivision plan or being required to construct public roads. This provides for a simpler subdivision submission. It allows a rural landowner to provide for family members and/or make some income to sustain a rural business without fully engineered development plans and their associated costs. The following standards apply.

- A. Site. The landowner shall submit a drawing on the plat showing the entire property at a scale appropriate for showing the parcel and area to be subdivided (Figure 11.208A). It shall show an easement for access to lots. The remainder of the property shall be labeled “residual land for future development.” The lots and easement shall be on another drawing at 1 inch to 100 feet.

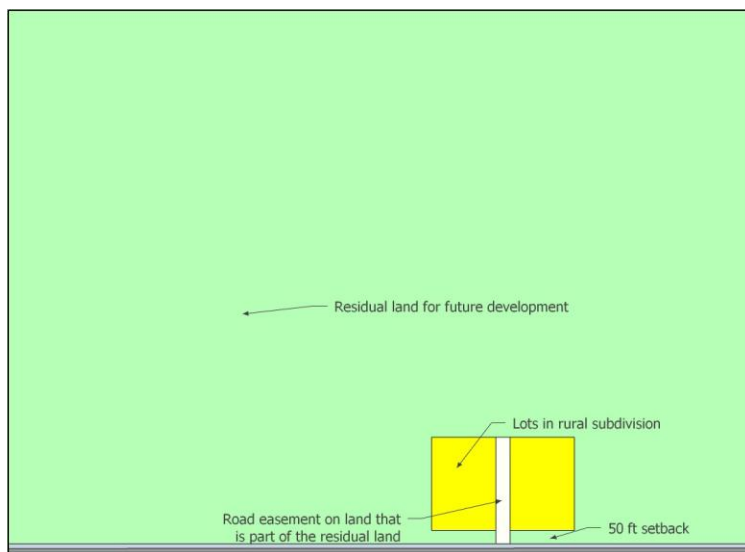


Figure 11.208A Rural subdivision of a property

- B. Density. Provided the parcel is greater than 67 acres, a landowner may subdivide two or more one-acre lots at a density of 0.03 dwelling units per acre, up to a maximum of six lots.
- C. Access Easement. The lots shall front and take access from an easement that remains owned by the landowner who is subdividing the land. The easement shall be 66 feet wide and be within 15 degrees of perpendicular with the existing road. The lots shall be set back at least 50 feet from the ultimate right-of-way of the existing road, and that land shall likewise remain in the ownership of the subdividing landowner. The easement shall provide access to any future development.
- D. Improvement. The access shall provide a gravel lane. The developer of the remainder shall be responsible for paving to jurisdictional standards and installing utilities.
- E. Plat. A plat of the area being subdivided is required to meet the standards of a preliminary plat (Figure 11.208D). It shall show the lots, easement, bufferyard, and an area at least 50 feet beyond the lot boundaries. If the property to be subdivided drains toward the public street, the plan shall show a storm water basin, and the setback from the street may be required to be increased to provide adequate land.

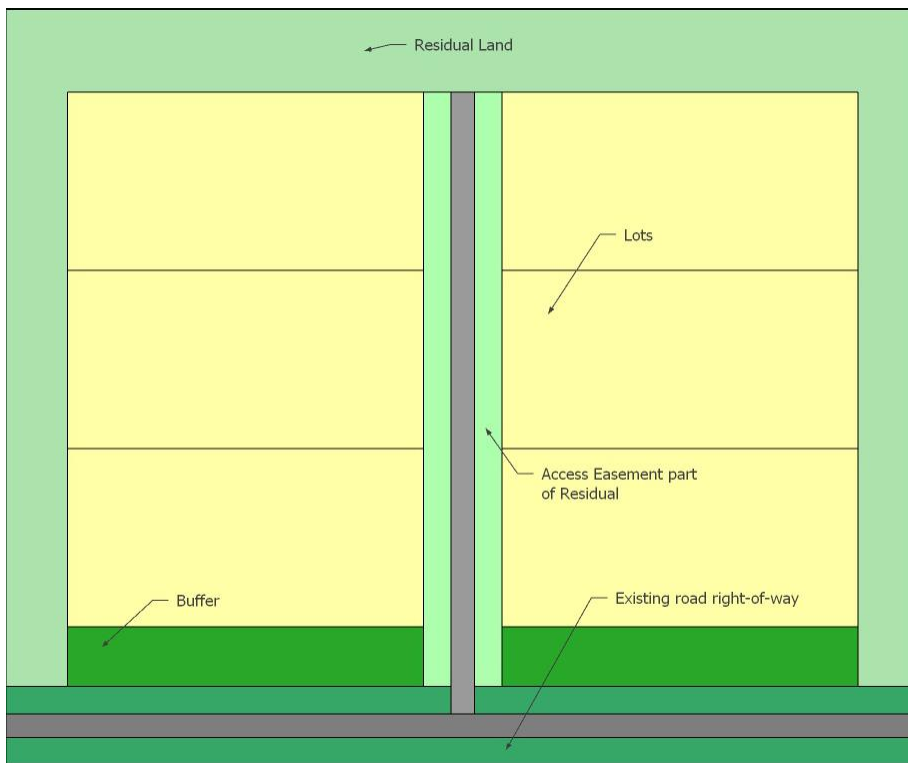


Figure 11.208E Plat of subdivision

- F. Future Subdivision. Notes on the subdivision plat shall indicate that, when further subdivision occurs, it shall be a major subdivision. The developer doing the subdivision shall be responsible for paving a street and installing utilities and drainage in the easement. It is the developer's responsibility to provide the required landscaping in the buffer and detention for existing dwellings or lots.
- G. Titles. The titles to the subdivided lots shall require the lot owners to become part of the homeowners' association when subsequent development occurs.

Section 11.209 Interim Developments

Interim development is intended to permit landowners some development when the area is rural, while planning for more intensive development when the jurisdiction extends public utilities to support higher densities in the future. Two types of interim development are provided. Section 11.210 provides for development designed for re-subdivision. Section 11.211 provides for a cluster development with on-site waste water facilities and wells. The purpose is to allow interim development options that do not preclude the more intense development that can be done with public sewers, as planned by the jurisdiction. This avoids having low-density subdivisions that make the extension of utilities too expensive.

Section 11.210 Large-Lot Subdivision

{Sidebar}

The problem with large residential lots developed before sewers become available is that these areas are too costly to serve in the future. As a result, the cost of extending service to nearby areas is increased or extension blocked. A second problem is that homes on large lots are most often built near the middle of such lots and make future re-subdivision less valuable.

{/Sidebar}

Large-lot subdivisions (Figure 11.210A) are designed to allow a landowner to fully subdivide a property, while simultaneously putting in place an approved preliminary plat based on anticipated lot sizes that will require public sewer and water service. This ensures that, when they reach the property, sewer and water services can be efficiently utilized, providing economic benefits to the jurisdiction and the development's landowner. The following rules apply.

- A. Lot Size. All lots shall be a minimum of 10 acres with minimum 400-foot width.
- B. Re-Subdivision Preliminary Plat. As part of the final subdivision plat, a sheet showing a re-subdivision plan (Figure 11.210B) shall be approved and recorded. It shall show the division of each ten-acre lot into Suburban (S), Auto-Urban (AU), or Urban (U) district lots, in accordance with the comprehensive plan.



Figure 11.210A Plat showing 10-acre lots



Figure 11.210B Re-subdivision of 10-acre parcel, locating initial home site

- C. Open Space. Provisions for the ultimate open space of the future district shall be provided as common open space in both the 10-acre development plat and re-subdivision plats. The open space may be part of a 10-acre parcel, provided the total open space requirement is met.
- D. Streets. The streets in the re-subdivision plat shall provide connectivity for the much larger development and not be simply a cul-de-sac on each 10-acre lot.
- E. Initial Dwellings. The houses on 10-acre lots shall be placed to fit on one or more ultimate subdivision lots with proper setbacks.
- F. Special Taxing District. A special taxing district shall be created to install water and sewer services on the initial roads when they reach the site.

Section 11.211 Interim Cluster Development

Landowners may submit a request for an interim cluster subdivision and a remainder to be developed later. Interim cluster developments shall meet the standards of this section.

- A. Density and Lot Size. A development shall be laid out to meet the standards of the S, AU, or U district for which it is zoned or designated in the comprehensive plan.
- B. Scale of Interim Development. The interim subdivision may provide for no more than 15 percent of the allowed development, pursuant to the following conditions.
 - 1. A site-capacity calculation shall identify the minimum total open space to be provided and all resource areas to be protected.
 - 2. The developer may ultimately provide more open space and receive the density bonus associated with that open space (Division 3.300).
 - 3. The initial and final development shall proceed as a major subdivision.
- C. Interim On-Site Utilities. This requires interim septic disposal areas.

1. Septic systems shall be installed to the rear of each unit in areas that are listed as interim open space (Figure 11.211C).

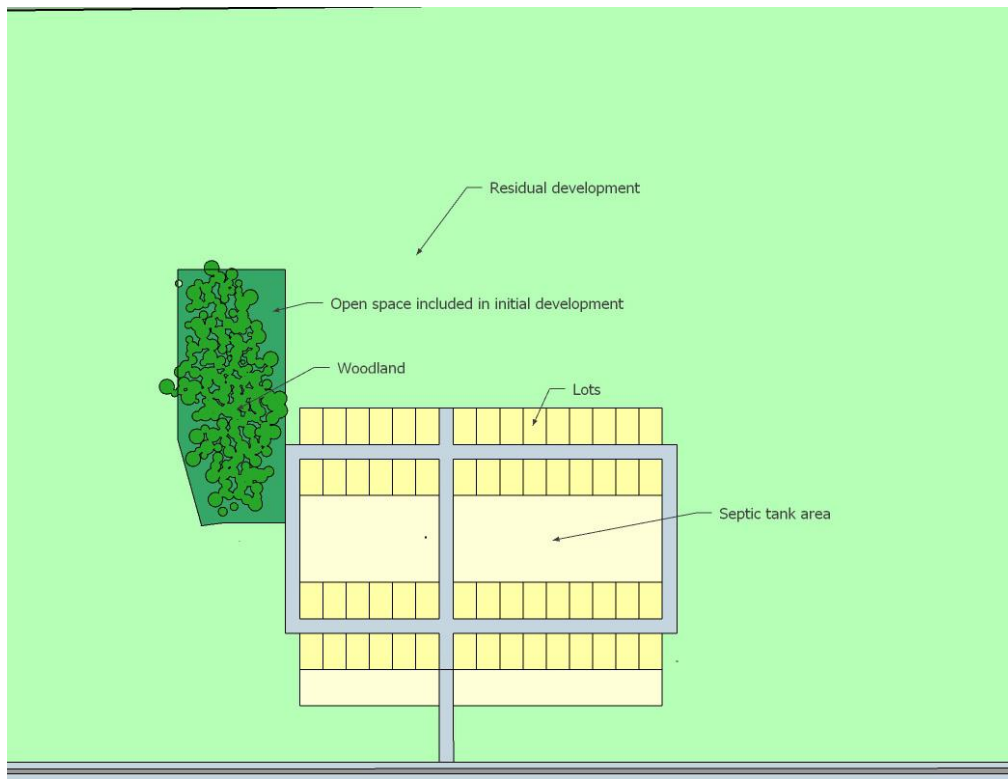


Figure 11.211C Interim cluster development with septic tanks

2. All lots shall have individual wells unless a deep well is approved by the jurisdiction. Common septic systems may be used.
 3. At the time of final development, the tile fields shall be removed, and land converted to open space.
 4. The initial development shall install dry sewers and water lines to jurisdiction specifications, so all units may be easily connected when utilities are extended. If common wells or septic systems are provided, these lines may be used.
 5. The purchasers of interim lots shall hook to public sewer and water services as soon as they are provided, at their own expense. They shall also be responsible for capping existing wells on their lot.
- D. Interim Common Utilities. As an alternative to C above, a land treatment system and public well may be provided for the initial cluster. Sewers and water lines meeting jurisdiction standards shall be installed and used to service the lots.
- E. Special Taxing District. A special taxing district shall be created to pay for the removal of any septic systems or other infrastructure.
- F. Remainder. The remainder of the parcel shall be shown at a smaller scale on the plat, with the following text included as notes.
1. The further subdivision of the parcel is dependent on the jurisdiction certifying that sewer and water services are available.

2. The developer is responsible for connecting the dry or wet sewers and water lines to the extended public facilities.
3. The developer is responsible for removing septic tanks and fields, wells, or land treatment facilities and making the land suitable for new construction or use as open space.
4. The developer shall submit a detailed listing of restraints on the remainder of the property to be developed, including maximum dwelling units, minimum open space, and the acres of resources on the site to be protected.

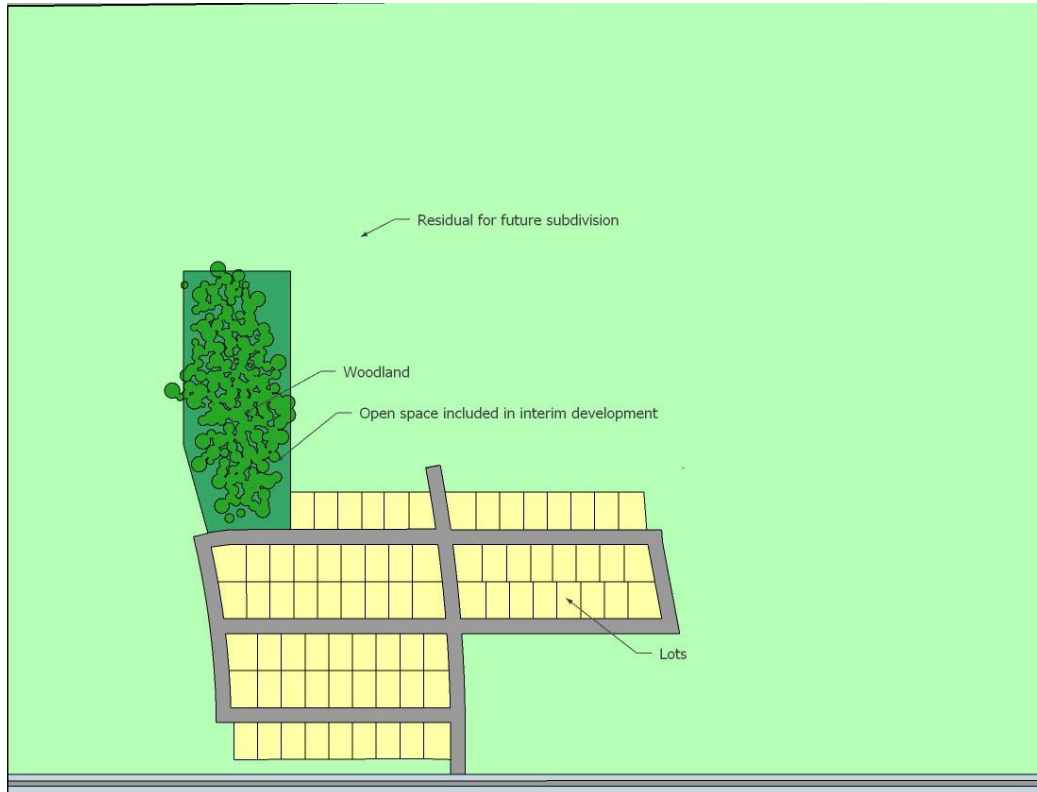


Figure 11.211D Interim cluster with land treatment and public well

- G. Submission of Remainder. The submission of any phase of a subdivision on the remainder shall be as a major subdivision. The development submission shall conform to the maximum density and minimum open space established with the interim developments, provided the developer has the option of providing more open space and receiving a higher density. The calculations shall be based on the entire site, interim, and remainder.

DIVISION 11.300 AUTO-URBAN DESIGN

{Sidebar}

This division provides design options for all auto-urban districts, although the jurisdiction may select the ones to use. The fact is that none can produce an urban character. This ordinance recommends using urban districts that require structured parking and keeping auto-urban zones to a minimum.

{/Sidebar}

Section 11.301 Purpose

The AU district is defined by surface parking which, for nonresidential uses, consumes more land than the uses. Urban character is impossible because enclosure is impossible and the floor area ratio (FAR) is limited to less than 0.8. The design strategies are intended to lessen the visual impact of the parking. These strategies camouflage the dominance of space devoted to parking. All are intended to improve the attractiveness of the auto-urban environment. Some of these strategies may also be applied to commercial areas in suburban districts (Sections 11.302–11.304). Pattern book procedures shall be used for approval of such designs.

Section 11.302 Small-Scale Parking

Neighborhood and small community-scale developments can reduce the impact of parking by breaking it up into small lots that can be screened by buildings and landscaping, so that users' movements from parking areas to sidewalks or into buildings are short. This hides the extent of the total parking required for the use. The following are the design elements that reduce the impact of parking.

- A. Street Parking. The street should provide angled parking to maximize the space for vehicles on the street.
- B. Maximum Parking Bay. No parking bay shall accommodate more than 40 vehicles and they should average less than 36.
- C. Side Parking. Parking is located to the side of the building and is no more than 75 feet in width. A hedge should separate the parking from the sidewalk, providing screening.
- D. Shared Rear Parking. Shared parking is located to the rear of several freestanding buildings. Buildings should have side or corner access to reduce walking distance to buildings. At least five feet of landscaped area shall surround the parking on each lot.

Section 11.303 Parking Block

A commercial area may provide a block surrounded by commercial uses to serve as a common parking lot and green. The block has parallel parking on the street and an interior parking lot. There shall be 25 feet of green space between the interior parking and sidewalk in auto-urban areas and 40 feet in suburban. The open space shall provide for passive recreation and small tot lots (Figure 11.303). It shall be landscaped with six plant units per acre plus street-tree and parking landscaping per Table 8.205.

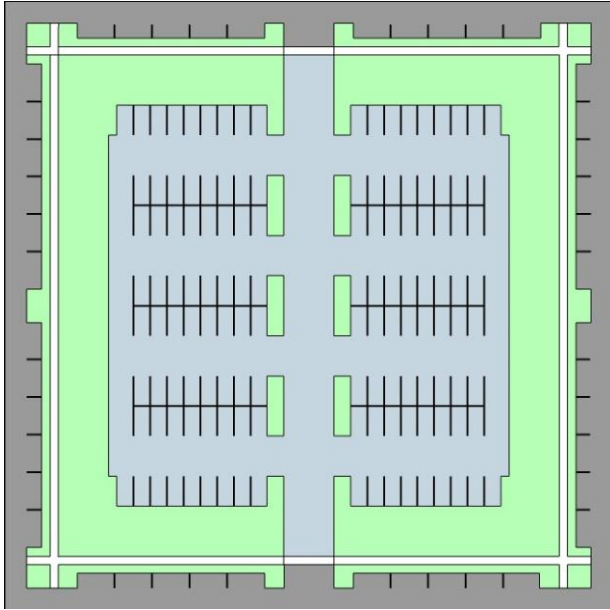


Figure 11.303 Central square providing parking and green space

Section 11.304 Build-To Line with Rear Parking

This approach creates a street with on-street parking that provides urban enclosure for the street but surrounds the buildings with parking, so most users must walk through parking to get to stores. The street, parking, sidewalk, and adjacent building height shall produce a D/H ratio (distance across street divided by building height) no greater than 2.3. Where blocks are more than 400 feet long, at least one pedestrian access to the street from the parking shall be provided every 260 feet. The access may be enclosed from the weather or open air. The minimum width of connections is at least 16 feet clear of any obstructions. Where the block consists of freestanding uses, access from parking to store by rear or side doors shall be required. Where art, landscaping, seating, or other amenities are provided, the design shall maintain the 12-foot clear walkway.

Section 11.305 Front Yards

This approach attempts to make the AU district more suburban in appearance. It requires a street yard setback of at least 12 feet and a parkway of five feet width. In the S district, the setback shall be 20 feet and the parkway a minimum of eight feet. This may result in a lower intensity as lot size and required yards interact. The street right-of-way should be increased, if necessary, to provide a parkway for street trees. The street shall have parallel parking and rear parking lots.

Section 11.306 Front Pedestrian Precinct

This design applies to shopping centers with parking in front of the buildings. It requires a pedestrian precinct to be constructed between the parking and building. The precinct shall have a minimum width of 20 feet and average of 30 feet. The building footprints shall be staggered to provide for a variety of spaces for sitting, eating, art, and landscaping to make a varied pedestrian experience. Street-tree planting on the edge of the sidewalk shall be in 25-square-foot raised planters providing four canopy trees per 100 feet.

Lighting, planters, bollards, or other techniques shall be used to create an edge to the pedestrian area adjoining the parking area.

Section 11.307 Outparcels

Outparcels are used in large shopping centers with individual lots on the street face. The following design standards shall be met.

- A. Sidewalks. The sidewalk on the arterial or collector street shall be moved from the street right-of-way to interior lot lines of the outparcel buildings. The street right-of-way shall be reduced by the amount of the sidewalk.
- B. Interior Sidewalk. The sidewalk relocated in A above shall be in an interior pedestrian right-of-way, providing for a five-foot sidewalk in a 12-foot right-of-way. At least one plant unit per acre is required per every 120 feet of this right-of-way.
- C. Bicycle Lanes. Where bicycle lanes are required, separating them from the street to the parkway in a curving alignment with trees on either side shall be considered where there is at least 660 feet of frontage.
- D. Pedestrian Linkage. A pedestrian linkage shall be provided from the outparcel sidewalk to the sidewalk that fronts the major buildings. Where blocks are 400 feet in length or less, the sidewalks on perpendicular streets shall serve this function. On longer blocks, connections shall be provided so there is at least one pedestrian linkage every 300 feet. Internal connections shall be a minimum of 20 feet wide with a 10-foot sidewalk. The remainder shall be landscaped with one type VI plant unit per 100 linear feet.

Section 11.308 Loggia

Parking lots may be screened from the street with a loggia (Figure 11.308). The following requirements govern this design.

- A. Loggia. The loggia shall be at least 16 feet in height and eight feet wide on the interior of the structure. The columns shall be no more than 16 feet on center. It may be either open air or roofed.
- B. At least 25 percent of the loggia's structural bays shall have the back panel be a wall, screen, use, or landscaping. The following uses are encouraged to occupy portions of the loggia: small shops, kiosks, ATMs, and transit stop shelters.
- C. Open areas may be used for sitting, walking, or landscape materials.
- D. Landscaping is required to provide a hedge between the parking and the loggia, except where the uses screen views to the parking lot. If the loggia top is open, an understory tree shall be planted in every third bay. Both open and trellis roofs may be required to have vines.
- E. Lot Landscaping. On-lot landscaping, excluding the loggia area, is required as indicated in Table 8.205.
- F. Street Trees. The street parkway should be planted with one type VI plant unit (Table 8.103) per 300 lineal feet, as the loggia serves as screening.
- G. Signs. Where the loggia screens parking for a use with more than 60,000 square feet, that use may install a sign on the loggia structure. Its size conforms to the freestanding sign standards (Section 9.209) except that the height of the arbor shall be the maximum height.



Figure 11.308 Loggia screening of parking area

Section 11.309 Approval

The developer may propose to use one or more of these techniques to enhance the quality of the AU district. These apply to developments or centers rather than individual freestanding uses. Section 11.304 may be used for a block of freestanding uses where it shall be applied to whole block faces.

DIVISION 11.400 OFFSET URBAN STREET PATTERN

{Sidebar}

This division presents a new approach to urban design for the U district, for new communities or large growth areas. It separates pedestrians from vehicular traffic, relocating pedestrians from the street to a parallel pedestrian precinct. It achieves high FAR, a vehicle-free pedestrian precinct, and improved walkability in a center. It requires a large area and uses one-way streets. The provision of dedicated parking structures increases total FAR and allows the development of smaller attached or freestanding buildings along the pedestrian precinct.

{/Sidebar}

Section 11.401 Purpose

This division provides an alternative street pattern for a large-scale urban development of mixed uses or new communities (Figure 11.401). The intent is to create a more pedestrian-friendly environment that does not force pedestrians to share space with automobiles. The pattern has a pedestrian precinct that runs through the center of the blocks rather than on sidewalks along the street. The one-way streets are for automobiles and transit. The offset street pattern eliminates the conflicts between automobiles and pedestrians at intersections, increasing street capacity and providing an automobile-free pedestrian precinct. One-way streets improve capacity by eliminating left turns and pedestrian movements at intersections, reducing signal delays. The following sections govern the design of this urban street pattern.

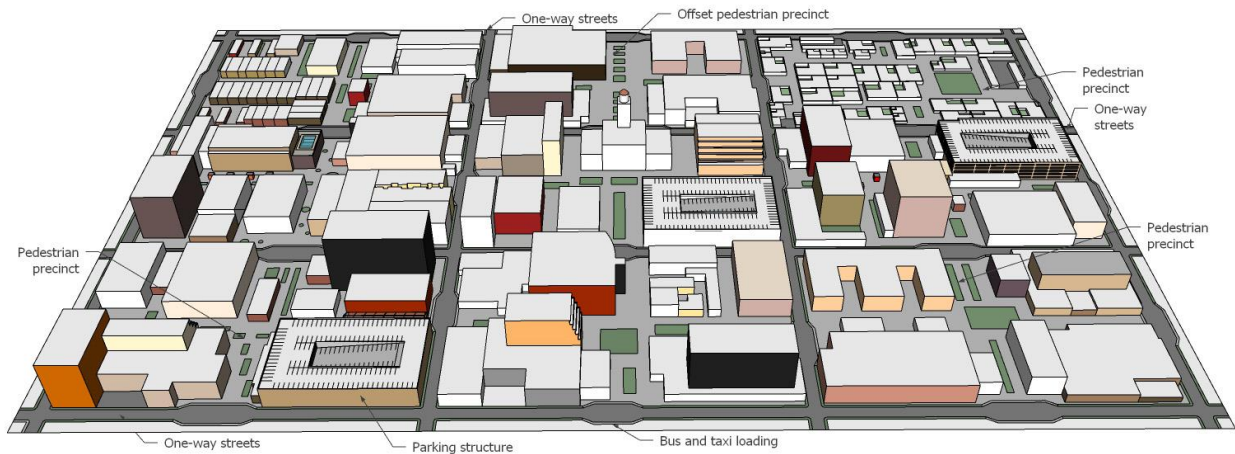


Figure 11.401 Nine-block offset pedestrian and street system

Section 11.402 Blocks

A minimum of 9, 12, 15, 16, or more blocks is required for this pattern to be applied. The grouping of blocks shall be rectangular, with boundary streets being one-way. Uses are commercial, mixed-use, or residential. The blocks shall have a minimum dimension of 400 feet and minimum area of 200,000 square feet. The block shall contain a pedestrian precinct that runs roughly down the center of the block (Figure 11.402 shows a nonresidential block). Nonresidential or mixed-use blocks shall have a minimum FAR per Section 3.407. Urban residential uses are regulated by density.



Figure 11.402 Pedestrian precinct in the center of the block

Section 11.403 Streets

The streets shall be one-way streets that meet the following design criteria, rather than the street criteria of Division 13.200.

- A. **Vehicular Streets.** The street system is based on one-way streets with two traffic lanes. The right-of-way is 40 feet wide with 24 feet of paving curbs and a parkway of eight feet on each side. No sidewalks are permitted in the right-of-way. There is a 40-foot-long transition from the vehicular street to the pedestrian street intersection.
- B. **Pedestrian Street Intersection.** At about mid-block, the pedestrian precinct intersects with the street and the right-of-way shall be increased to provide on-street parking for cabs, ride share, self-driving cars, and/or transit loading. The right-of-way at the pedestrian street intersection shall be increased by 16 feet or, where bus transit is available, to 24 feet, to 56 and 64 feet, respectively. The minimum length of this widening shall be 80 feet, adjusted for types of vehicular access at the intersection with 40-foot transitions in width. Buildings shall be set back at least 12 feet in this area to allow access to transit or other vehicular pickup.
- C. **Parking.** No on-street parking is permitted. All parking shall be in parking structures or, for residential spaces, accessed by alleys. The parking may be public garages or private, provided by larger office or hotel uses.
- D. **Pedestrian crossings** should be clearly differentiated from vehicular street pavement by patterns, texture, and/or colors.
- E. **Loading.** Truck loading areas are permitted to take access from the streets and shall be screened from the street or pedestrian precinct.
- F. **Landscaping.** The right-of-way provides for eight feet on either side of the pavement. This area shall be planted with two canopy trees per 100 feet and ground covers that do not require mowing.
- G. **Sidewalks** shall not be provided in the right-of-way of the vehicular streets. Where the offset block pattern ends and the conventional pattern begins, the pedestrian street intersection shall connect to the conventional street and sidewalk pattern. The street right-of-way on the edge street is enlarged to 50 feet and provide sidewalks.

Section 11.404 Pedestrian Precinct

The pedestrian precinct is intended to provide a pedestrian-only area, generally in the center of the block. The following rules apply to the design.

- A. **Public Access.** The pedestrian precinct shall be open to the public 24 hours per day. It may be open to the sky or enclosed by a roof.
- B. **Mid-Block Connections.** The pedestrian precinct street crossings shall generally be at mid-block. Where a developer requests, the pedestrian precinct may be moved up to 100 feet off the mid-block line for both block faces with the approval of the planning director after consulting with the owners of the land on the adjoining block.
- C. **Minimum Width.** The minimum width of a pedestrian precinct shall be 36 feet. Areas of landscaping, street furniture, and kiosks or buildings may be within the pedestrian precinct, provided the following conditions are met.

1. An emergency access 12 feet wide shall be delineated from street to street. At turns, the jurisdiction engineer shall approve the turning radius.
 2. At no point shall any landscaping, street furniture, kiosk, or building intrude into the emergency access.
 3. Landscaping or street furniture shall not reduce the minimum width of the pedestrian precinct to less than 30 feet.
 4. Kiosks. Kiosks of no more than 36 square feet may be placed in the pedestrian precinct, but the minimum width of 36 feet shall be retained for shoppers.
 5. Buildings may split the pedestrian precinct into two sections, provided the total width is increased to 40 feet and the portion having the emergency access is at least 26 feet wide.
 6. Enclosed pedestrian precincts shall provide an electronic door 16 feet wide and 20 feet high to permit emergency vehicle access.
 7. Surface Drainage Channels. The developer may provide surface drainage channels for storm water management and/or aesthetic reasons. The width of these channels shall be over and above the minimum width.
- D. Landscaping. The pedestrian precinct is paved but may have areas of landscaping, planters, or surface drainage channels, provided they meet the standards of C above. One plant unit shall be provided for every 150 feet of linear length.
- E. Street Furniture. The developer shall illustrate the types and placement of street furniture to be installed in order to create an interesting and functional pedestrian environment. This includes art, decorative elements like clocks and navigational signage, seating, play areas, eating areas, movable kiosks, or activity areas.
- F. Pervious Pavement. To the maximum extent feasible, the pedestrian precinct shall use pervious pavements to reduce storm water discharges by allowing subsurface storm water detention.

Section 11.405 Planning Area

The jurisdiction may identify a planning area in the comprehensive plan or designate an overlay district in the U district for this form of development. A developer may submit a plan in which all land proposed for the offset planning area is to be controlled by the developer. The following requirements apply to such a planning area.

- A. Area. The offset pedestrian precinct shall have a minimum size as per Section 11.402.
- B. Plan Elements. The plan shall show the blocks, location of block connections, emergency routes, proposed centerline of the pedestrian precinct, proposed parking structures, and details of the connection to the surrounding street circulation. A staging plan will govern the development over many years.
- C. Special Taxing District. A special taxing district shall be created to ensure adequate public parking and maintenance of the pedestrian precinct.
- D. Flexibility. The development will take many years to develop, so flexibility is required to modify the plan to meet changing needs or conditions over time. The planning director may authorize changes, provided minimum standards for the pedestrian precinct are maintained. The following are criteria to be met.
 1. Priority shall be given to increases in width to provide amenities in the pedestrian precinct.

2. Enclosure of the precinct is permitted for branches or for an entire link. Such areas shall be open to the public 24-7.
3. Reducing an area may be permitted only where other buildings have created additional width, so the minimum and all features can be preserved.
4. Owners of an entire block may modify the plan for that block, provided pedestrian crossing areas work with adjoining blocks and the modified design is approved via a pattern book application.
5. Secondary pedestrian precinct areas may be permitted to provide access to small shops off the primary pedestrian precinct. The width of the primary shall not be altered, and the secondary shall have a minimum width of 12 feet.
6. A second level to the pedestrian precinct may be approved to provide access to upper-level restaurants, shops, or residential units. Except for residential areas, the pedestrian area shall be open 24-7. Residential areas may be gated.

DIVISION 11.500 GRADE-SEPARATED PEDESTRIAN PRECINCT AND MEGASTRUCTURES

{Sidebar}

This division represents a rarely used development form, a megastructure, where the pedestrian precinct is elevated above street level and transit lines. Parking is below or within structures. The pedestrian precinct is free of vehicles and walkable. High intensities are achieved because all land is developable.

{/Sidebar}

Section 11.501 Purpose

The purpose of this division is to provide design guides for grade-separated pedestrian precincts for the Urban Core (UC) and Urban Mid-Rise (UM) districts or for urban transit-oriented development (Figure 11.401). The megastructure also has applications where clustering needs very high open space ratios (OSR) and some density in the Natural (N) district and in areas at risk of flooding, sea level rise, and fire hazard. In urban applications, intensity is increased because the area above a street or rail line is not lost as buildings and pedestrian precincts rise several levels above it. The pedestrian precinct results in enhanced walkability because there is no conflict with automobiles, and high-intensity mixed uses increase the floor area of residential uses in the development. Smaller megastructures are permitted in the N district or in the maritime shoreline protection area, where they provide density at very high OSRs because all development is located within the megastructure. In the oceanic shoreline (Section 5.408) or in floodplains, it is used to elevate the development above the reach of a 100-year sea-level rise or flooding.

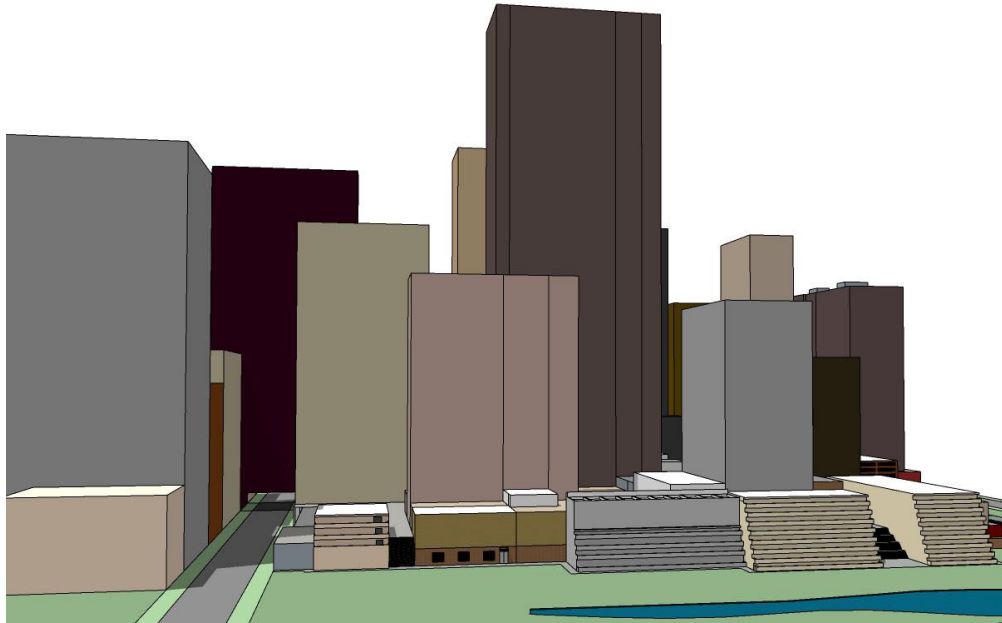


Figure 11.501 Megastructure for urban core

Section 11.502 Planning

The following are the planning requirements for a grade-separated pedestrian precinct.

- A. **Area and Zoning.** For new UC or UM districts, there should be a minimum area of 200 acres. For transit-oriented development, the jurisdiction shall have a plan for an elevated pedestrian precinct that covers at least 20 acres. For redevelopment, the jurisdiction shall have a plan for redevelopment with a grade-separated pedestrian precinct covering a minimum of three blocks. In the N district or oceanic shoreline applications, see Section 3.204 and Division 5.400, respectively.
- B. **Streets.** The existing or new streets shall be at ground level. This level provides access to parking and loading. They may be totally covered by the structure above or portions may be open to the sky. All land in streets contributes to development because a right-of-way under the pedestrian precinct is included in calculating maximum floor area.
- C. **Parking.** The grade level shall be used for parking and loading. The parking element shall determine whether there are additional floors of parking above or below grade or whether there will be a portion of the megastructure devoted to parking.
- D. **Transit.** The plan shall identify transit stops for rail or bus modes. The location shall be chosen so that modal transfers are at a common location. A vertical movement plan shall be developed that moves riders to the various pedestrian precinct levels and identifies any buildings that are to have direct connections to this vertical transportation core.
- E. **Service.** Service for delivery and garbage pickup and the routing of vehicles to these areas must be planned and be of sufficient height to accommodate the standard vehicles doing the servicing.
- F. **Edge of Precinct.** The exterior of the elevated pedestrian precinct must be designed to link to streets, sidewalks, paths, and land uses that are at-grade. This may be done with buildings that step down from the pedestrian precinct or portals that provide for pedestrian movement between levels.

- G. Open Space. The development shall have at least 15 percent open space, with 12 percent being at-grade land for a primary community open space.

Section 11.503 Precinct Elevation

The pedestrian precinct elevation is to be established as follows.

- A. UC or UM Development. On level land, the pedestrian precinct streets should be a minimum of three stories above the ground-level grade on which there are existing streets (Figure 11.503). Where the land slopes, the minimum grade elevation shall be set so as to achieve the parking area that would be achieved on a level site. In the oceanic shoreline, it shall meet the provisions of Section 5.408. In the N district, it shall be approved as part of the development plan,
- B. Transit-Oriented Development. The pedestrian precinct shall be at least one level above rail, bus, and streets.
- C. Elevation. The plan shall designate the elevation of the primary pedestrian precinct of a district. (*Example: UC district, 880 feet above mean sea level*). The elevation shall be at least 33 feet above ground for level sites; use 11 feet per floor for sloped conditions.

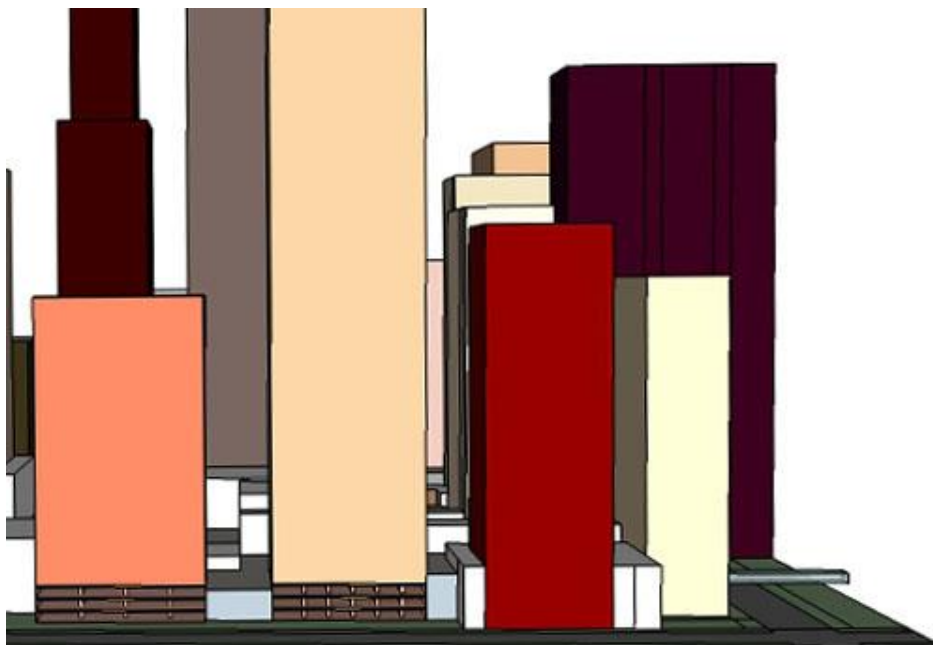


Figure 11.503 Three levels of parking below pedestrian precinct

Section 11.504 Incremental Development

The development of an elevated pedestrian precinct in the U, UM, or UC districts will require an incremental development over many years. Where there is incremental development rather than a redevelopment project with a single developer, it is critical that there be an overall plan that sets the critical elements detailed in Sections 11.502 and 11.503. A critical element will be connectivity. The development plan shall identify the centerline of the pedestrian precinct, whether open air or enclosed, that will provide access to all buildings on the pedestrian precinct. Connection to adjoining parcels requires connectivity to adjoining interior spaces and to the pedestrian precinct. The first buildings constructed shall be reviewed

to show that they provide appropriate frontage on the pedestrian precinct. The development shall include a portion of the pedestrian precinct to the centerline. Section 11.506 addresses connectivity across an existing public street in the interior of the development.

Section 11.505 Pedestrian Precinct

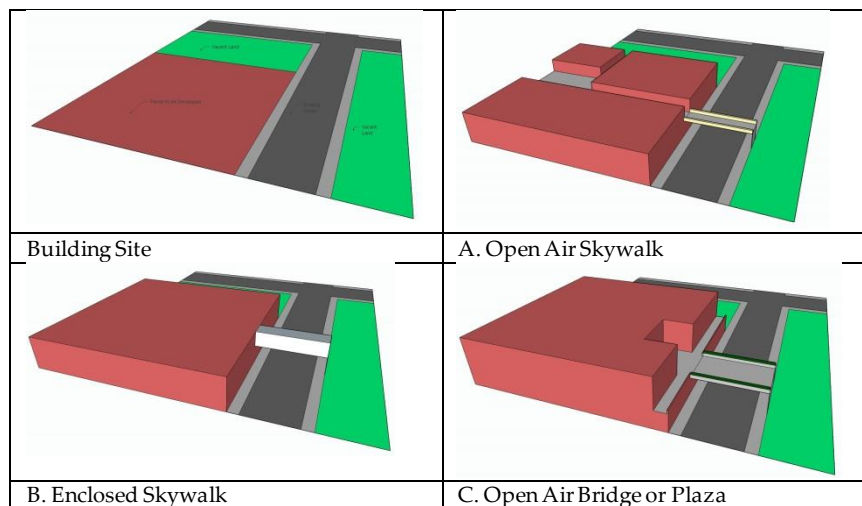
The pedestrian precinct plan shall delineate areas for the pedestrian precinct and buildings in a form to provide the structure for building sites. The following shall be included.

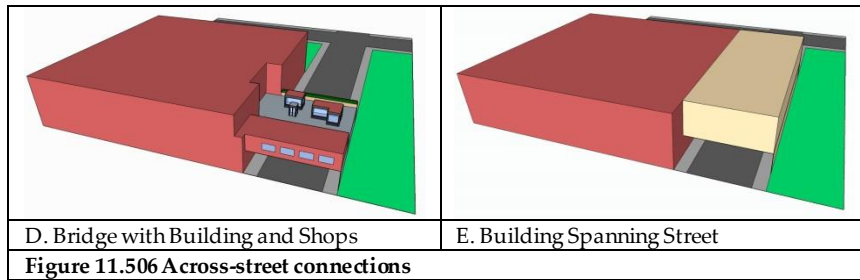
- A. Width. The minimum and average width of the pedestrian precinct shall be 20 and 55 feet, respectively to allow for public spaces. Branches that are cul-de-sacs or loops shall have a minimum of eight feet and average of 12 feet.
- B. Levels. The number of levels permitted shall be identified. Levels will have stair or ramp connections and at least one elevator every 400 feet.
- C. Connectors. The transit connector shall be located, and capacity specified, to accommodate demand based on transit ridership and size of the development.
- D. Transitions. The type of transition from the precinct to grade shall be identified. It may be a building that steps down to grade with balconies for the associated use and an entry on both at-grade and pedestrian-precinct levels. A second option is a portal location that provides stairs, escalators, ramps, and elevators.

Section 11.506 Across-Street Connectivity

Incremental development may result in a phase of development where connectivity must be established across streets. Figure 11.506 shows five options for the first property, shown in red, proposed for development to provide a crossing of that existing surface street. The green shows vacant land planned to become part of the grade-separated pedestrian precinct. The options are discussed below.

- A. Open Air Skywalk. This is the simplest connection and not generally desirable. It shall be a minimum of 12 feet wide. Its most appropriate use is for connection to ground-level vacant land or the transition to an existing building outside the grade-separated pedestrian precinct boundaries.





- B. Enclosed Skywalk. An enclosed skywalk shall have a minimum clear pedestrian area of 16 feet. If seating, kiosks, or other streetscape is provided, the skywalk shall be wider in order to provide the 16 feet of clear circulation. Skywalks may be multilevel and have the same limitations as A. Connecting to the upper level of an existing building outside the elevated pedestrian precinct is best achieved by skywalks.
- C. Open Bridge or Plaza. This provides an open plaza or bridge and shall meet the minimum precinct width. The structure should support landscaping, including trees. Like A and B, this should not be a permanent connection but used only at the edges.
- D. Bridge with Building and Shops. This alternative combines an open bridge with a portion contained within a building, with freestanding shops and kiosks. The building portion may be two stories high. This should be limited to areas where opening a road to daylight is needed or as a temporary connection.
- E. Building Spanning Street. The entire building crosses the street. This is the most desirable connection as it maximizes the floor area possible. If on the centerline of the pedestrian precinct, an enclosed precinct shall be provided. If open to the air, two buildings can cross the street.
- F. Temporary Connections. Options A, B, and C are temporary, and should be approved as such to be replaced by the development on the other side. D can be temporary or maintained while option E is built on the remainder of the street.
- G. Street. The streets may be entirely covered by parking floors below the pedestrian precinct. It is optional to open part of the street to the sky, primarily to allow better air circulation or the transition from the grade-separated pedestrian precinct to normal ground-level development. Open sections can also facilitate presentation of a use, such as an automobile dealership, that is otherwise unexpected within a megastructure.

Section 11.507 Air Rights

There are structural costs associated with the parking under the pedestrian precinct and the structure crossing the street. The jurisdiction shall provide the air rights for existing street rights-of-way under the crossing. All the area covered may be used in calculating the floor area of the building or parking structure.

Section 11.508 Small Properties

The pedestrian precinct centerlines shall be drawn in order to avoid the inclusion of small, individually owned properties, so that the property owner can take access and not be forced to provide a pedestrian precinct that occupies much of the parcel's area. If a small property has no frontage on a pedestrian precinct,

the planning director shall require the plan to be modified to provide a secondary precinct extension to connect the property.

Section 11.509 Pedestrian Levels

There may be more than one level in the pedestrian precinct. In large-scale UC and UM districts, there will be several levels associated with the main pedestrian precinct. Open air areas for eating and recreation on rooftops that are reached from the primary pedestrian level are encouraged. The following standards govern the development of secondary levels.

- A. Access. All such additional levels shall provide access by stairs, ramp and/or escalator, and elevator.
- B. Transit. The transit stop shall have direct access to the main precinct level in accordance with the precinct plan.
- C. Upper-Level Connections. Upper-level connections between buildings ten or more stories above pedestrian level are encouraged to allow movement between buildings without returning by elevator to the main precinct level. These upper-level connections are encouraged to have an outdoor area for residents' enjoyment.
- D. Elevation. The plan shall identify types of pedestrian levels, for general circulation and upper-level building connections at specific elevations. Other purposes, like upper-level dwelling types such as town houses or recreational uses, shall be identified.

Section 11.510 Open Space

In the UC and UM districts, there shall be a minimum of 15 percent of the site devoted to recreational open space, 80 percent of which is at grade. The remaining 20 percent may be on rooftop recreation areas. Open space is optional for transit-oriented development. The planning director may permit additional rooftop recreational land.

- A. Pedestrian Precinct. This does not count as open space.
- B. Major Space. A single area of ground-level open space is encouraged. Where more than one space is provided, each space shall exceed four acres in area. Where the megastructure is a redevelopment, existing parks may be used as open space regardless of size.
- C. Location. The ground-level space should be designed and located so as to provide residential uses with views and access to this space.
- D. Landscaping. The open space should be landscaped in accordance with a master open space plan that provides recreational uses, landscaping, and storm water management.

Section 11.511 Phasing

Developments with grade-separated pedestrian precincts will be built in phases. Multiple individual landowners/developers are to be expected. Phasing is critical to ensure the pedestrian precinct functions throughout the construction period. The following must be provided for in a phasing plan.

- A. Starting Point. An initial starting point shall be identified, which will be in the first phase.
- B. Connectivity. Subsequent phases shall abut the first phase, except as provided in C below.
- C. Transit. Where transit is available, on-site access to the stop shall be provided so residents of the first phase can walk to transit. An interim connection at grade or elevated shall be constructed as part of the

first phase. Any subsequent developments along the connector shall complete their section and any interim elements as required.

- D. Residential-Support Commercial. Access to critical residential supporting uses like food, drug, liquor, and entertainment commercial uses is essential to the residential component of the development. It should be available from the outset of the first residential phase. The plan shall indicate how this is to be achieved. It may be in the initial residential phase or at a location on the edge to be accessible from adjoining residential development as well as the megastructure.
- E. Pedestrian Precinct. The phasing shall be such that the pedestrian precinct is uninterrupted at all times. The planning director may approve skywalk connections as an interim solution to connect the first phases to the transit station.

Section 11.512 Master Developer

A master developer is required for all megastructure development or redevelopment in the UC, UM, or transit-oriented development. The jurisdiction shall approve a master developer with qualifications in coordinating large-scale developments developing over more than a decade. Where there are multiple landowners, a special taxing district shall be created to address the acquisition and development of at-grade open space, parking, transit improvements, and interim connections.

Section 11.513 Small-Scale Megastructures

The grade-separated pedestrian precinct may be adapted at a small scale for use in the N district or in the oceanic shoreline. In both cases, the megastructure is intended to be constructed by a single developer. The pedestrian precinct is raised above grade either to have parking underneath, with no automobiles on the pedestrian-precinct level, or to raise the precinct above oceanic shoreline elevation.

- A. Natural District. A megastructure of four or more stories with an internal pedestrian precinct is intended to allow residential use where the open space ratio approaches 1.0. Parking and waste disposal are located below to avoid vehicular and other conflicts with wildlife. Taller buildings permit creative ways to give all dwelling units views to nature and to have development that is compact. This creates a small perimeter to better manage the landscape to prevent forest fire damage. The megastructure also makes on-site fire protection feasible. The pedestrian area is to be designed to provide a controlled area for children and pets in addition to access to open space.
- B. Oceanic Shoreline. The sole purpose here is to provide a use of land in the oceanic shoreline that can be elevated well above the oceanic shoreline elevation so that economic life can extend beyond the eight-foot sea-level rise and storm surge. The caisson community (Section 5.407) is designed for communities where access to the ocean for commercial fishing or other business that must be conducted in this area can withstand sea-level rise. This is intended to allow communities that will go underwater to be rebuilt in place. For barrier islands or other exposed shorelines, a mixed-use structure including residential, commercial lodging, and supporting land uses (Section 5.408) is intended to allow beach vacation and tourism to continue in a sustainable manner on land that will ultimately be underwater. The megastructure approach means that the structure's scale is such that it can be elevated and designed to survive both sea-level rise and category 4 hurricanes and continue in business.

- C. Other Hazard Areas. In floodplains and fire hazard areas megastructures provide a means to develop or redevelop in a manner that provides safety from hazards either by raising development above flood level or making structures that are fire protected. In floodplains the structures may be permitted where they are elevated or floodproofed to three feet above the 0.002 flood elevation and have access above the 0.002 flood. In fire hazard areas the megastructure shall be designed to be fire proof and water shall be available on site to use exterior sprinklers to further protect the units.

DIVISION 11.600 MONOTONY AND SCALE

Section 11.601 Purpose

This division provides regulations that are intended to avoid monotony in residential developments where there is a tendency to have many units with a similar appearance. The purpose of the regulations is to force enough diversity into façades to eliminate monotony, while providing for harmonious communities. The following sections provide standards for a variety of housing types.

Section 11.602 Monotony, Single-Family

For most single-family development, the requirement of three lot sizes and different floor plans (Section 4.103) will reduce the potential for monotonous developments. The following regulations provide additional standards to prevent monotony. Where there are more than 48 units of a single-family or 48 buildings of two-family, duplex, or triplex types (Division 4.200) or where a pattern book submission is required, this section shall be followed. The developer shall present plans and elevations for each floor plan that is to be used in the development. For each floor plan, there shall be alternative façades provided to prevent monotony. There are universal standards for any type, and standards that apply to specific types.

- A. Floor Plans. For each development required above to address monotony, two floor plans for that dwelling or building shall be submitted.
- B. Façades. For each floor plan, the developer shall propose two façades so that the maximum of any façade type is no more than 10.
- C. Façade Design. There are seven elements that create different façades: roofs, architectural features, style, and four other elements. The planning director shall review the façade alternatives for their use of roofs, architectural features, or style in combination with opening design, materials, color, or orientation to achieve distinctive façades. Developers are encouraged to use multiple elements to achieve a broader market choice.
 - 1. Roof. The roof orientation shall vary according to type: normal, gable end, mansard, hippled, flat, or green. A roof pitch that differs by at least 3 in 12 from the base pitch shall be considered a different roof as well (Figure 11.602C1).

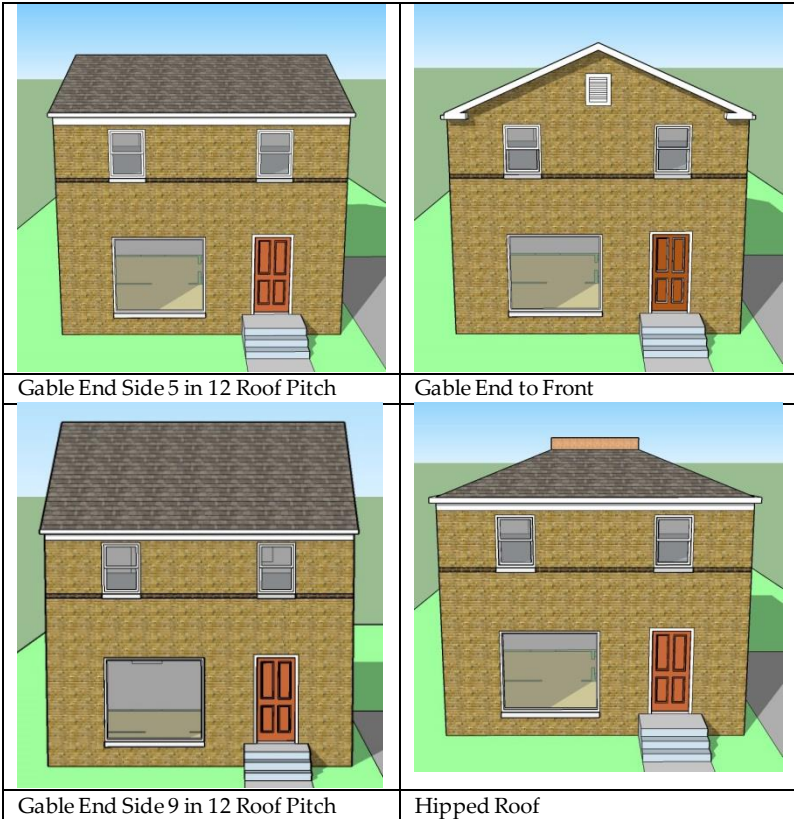


Figure 11.602C1 Changes to roof

2. Architectural Features. An architectural feature such as a porch, balcony, or projecting bay window that articulates the façade with a structure that projects toward the street adds depth (Figure 11.602C2).



Porch	Balcony
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Figure 11.602C2 Architectural features

3. Style. The use of a different historical style that provides a good facsimile of that style of architecture. Virginia Savage McAlester, *A Field Guide to American Houses*, rev. ed. (New York: Knopf, 2013) shall be used as a guide to style characteristics. The planning director may use the historic commission or hire an architect to assist in making this determination.
4. Openings. Different window types, such as double-hung, casement, and picture, with or without mullions, as well as different door designs, shutters, and window boxes add distinguishing details.
5. Materials. Altering the façade by a change in materials such as brick or stone masonry, stucco, horizontal or vertical siding, smooth or lapped wood or other siding material, alters its appearance (Figure 11.602C5).

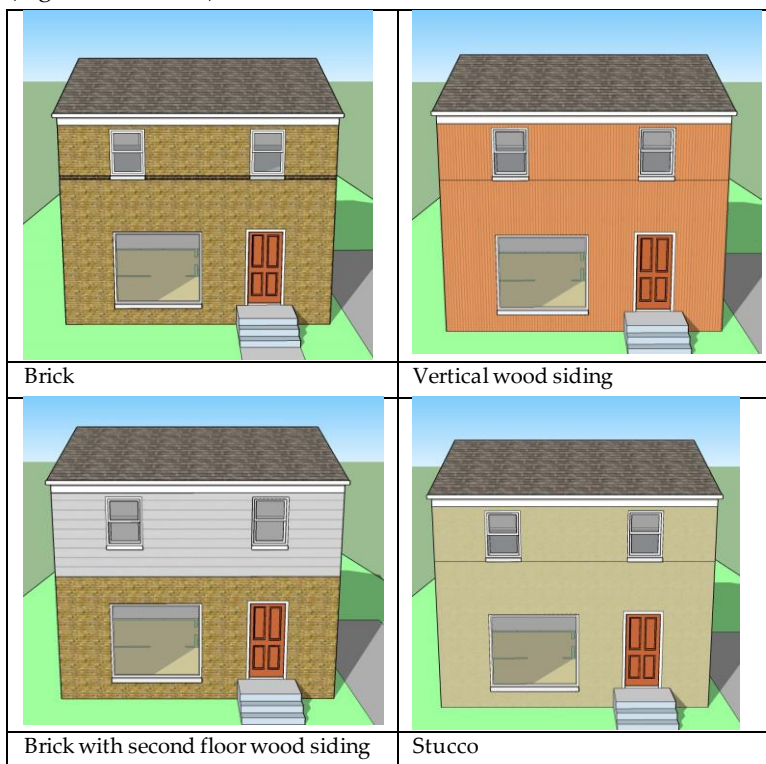


Figure 11.602C5 Change of materials

6. Orientation. Where the façade is asymmetrical, a switch from right- to left-hand or left- to right-hand orientation provides a distinction.
7. Color. Changing the color of some elements changes the character if the element is prominent. It may be required with 5 above with stucco, siding, and masonry.
8. Approval. The planning director shall review drawings of the different façade options. Approval requires using at least two elements as follows.
 - a. Roof or architectural features one to three others in combination.
 - b. Style and architectural features. Style often has set roof designs so that only gable orientation works, and the openings are style-related. Architectural features such as towers or bay

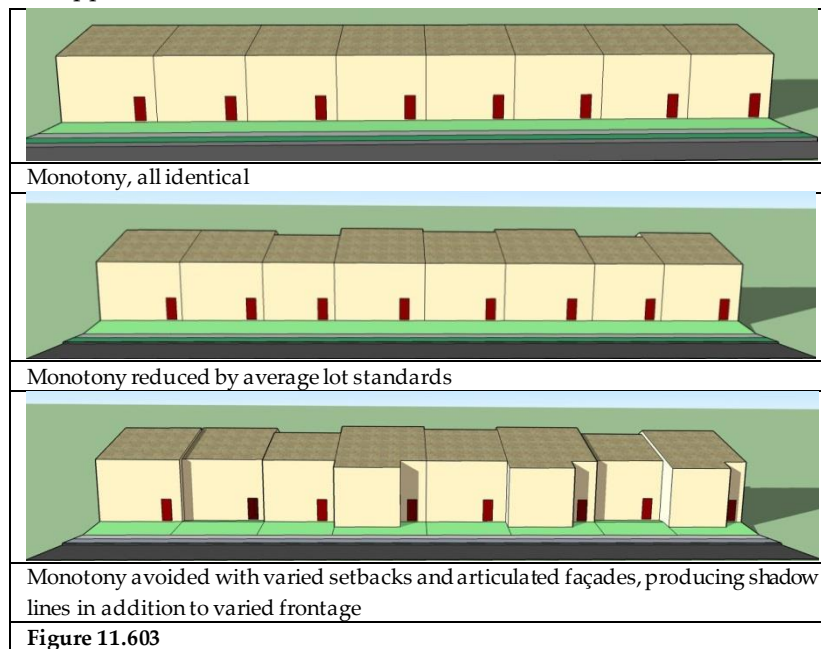
windows that result in a changed floor plan are acceptable approaches because two more floor plans are created.

- c. Style and roof. The use of materials, orientation, and colors are used where porch design or other elements that do not change floor area are combined.

Section 11.603 Monotony, Townhouses

Townhouse types must provide each of the three sizes in each block of units. There are two basic strategies that provide a unified building design that is not monotonous: varied setbacks and additional architectural features. The following standards are applied by modulation.

- A. Building. Each block of five or more units shall include all three unit sizes: small, average, and large. Blocks of four or fewer need only provide two unit sizes in a building.
- B. Setback. Where there are more than four units in a building the setback shall be varied with an offset of at least two feet. This may simply be a reduced or increased front yard, so unit setback varies. Varying the façade depth on a portion of one dwelling by at least three feet at the entrance to the unit relieves monotony, as in Figure 11.603.
- C. Architectural Features. An architectural feature such as a porch, balcony, or bay window that articulates the façade alters the appearance.
- D. Height. Changing the building height by adding a story or roof design or orientation alters the appearance.



Section 11.604 Monotony, Atrium Houses

Atrium houses require monotony controls where there are more than seven units in a row. The required front wall of these units reduces the effectiveness of average lot size. The following methods are used to avoid monotony.

- A. Landscaping. Some units may have a two-foot offset in the wall with landscape installed, such as a canopy tree, understory tree, and ground cover, or, in arid environments, cactus and rock arrangements.
- B. Walls. Where the wall screens an entrance space, the wall can be lowered, or decorative metal fence substituted for the wall. An open entrance with no wall but landscape, fountain, or art can be used to create a different front façade.
- C. Setback. The setback can be increased to up to three feet on 20 percent of the units in a block to provide for landscape in front of the wall.
- D. Windows. While atrium houses typically will not have windows facing the street, windows that are more than five feet above grade can articulate a façade. At this height, they allow light into the unit but not a view of living spaces.

Section 11.605 Monotony, Twin Houses

Twin houses can use the following design strategies in order to avoid monotony.

- A. Three Sizes. The requirement to have three lot sizes allows a range of façade options, both units the same size type (small, average, or large).
- B. Mixed Sizes. The second strategy requires each building to have two unit sizes. Mixing of these sizes has the potential to provide three different façades.
- C. Setbacks. Design where units in a building have setbacks that differ by three feet or each unit has an offset of at least two feet provides additional variety.
- D. Approval. The use of two of the strategies above is required for developments with more than six buildings. Where there are more than 20 buildings, all three strategies shall be used.

Section 11.606 Monotony, Duplex and Triplex

These units shall use the following strategies to alleviate monotony.

- A. Sizes. The three lot sizes result in three building widths to provide some variety.
- B. Upper Floors. Upper floors can be of smaller size, creating the potential for front façades that are not of uniform width and have different silhouettes.
- C. Features. The use of porches or other architectural features can create differences between units that have the same general floor plan.
- D. Approval. The use of two of the strategies above is required for developments with more than six buildings. Where there are more than 20 buildings, all three strategies shall be used.

Section 11.607 Monotony, Multifamily

Monotony controls address two issues: monotony in multi-building developments and the monotony in a building façade.

- A. Buildings. Buildings shall have façade offsets of at least three feet when they are more than 100 feet in length. Offsets should emphasize entrances and porches, which can be enhanced where garages are attached. Architectural treatments such as bay windows, oriel windows, balconies, towers, combined with changes in materials may be required to create interest in a façade.

- B. Length. Where there are four or more units, buildings must have different lengths, varying by at least 25 feet.
- C. Height. Buildings that have a different number of stories will also provide interest where the additional story is articulated or where towers create visual interest.
- D. Approval. The planning director shall ensure that longer buildings are treated as per A above. In multiple building developments, the plan should use the above techniques to provide a harmonious development where buildings are not monotonous.

Section 11.608 Approval

Developments that meet the thresholds of Sections 11.602–11.607 shall be approved via a pattern book submission. Plans and elevations of each floor plan type shall be submitted. The planning director shall review the proposals to determine if the submission provides sufficient variety. The planning director may require a sheet showing a block with just the unit size requirements and one with the alternative façade designs in order to facilitate a comparison. The planning director may require changes or additional criteria, issuing a detailed critique of why the proposal fails and the rationale for the changes.

Section 11.609 Single Building Offsets

{Sidebar}

Some communities want to prohibit construction of large rectangular buildings that provide little visual relief. These three sections provide such guidelines and ensure that mandating the offsets does not lower the maximum achievable floor area.

{/Sidebar}

Where there are large single buildings with smooth façades, such as glass curtain walls that have little relief and no shadows to show the articulations, horizontal or vertical offsets are required to avoid the monotony of large flat walls or, in the case of vertical setbacks, to allow more sunlight to reach the street. Section 11.610 addresses horizontal offsets and Section 11.611 addresses vertical setbacks. Both these standards can limit achievable floor area and height and setback modulation (Section 10.212) shall be applied to prevent that from happening. A third option is where the façade treats windows, entrances, and articulates the base, body, and top of the building to provide visual interest (Section 11.612).

Section 11.610 Horizontal Offsets

Where a building occupies more than 70 percent of the land in a block or where walls exceed more than 200 feet per face, one or more horizontal offsets shall be applied.

- A. Stepped Offset. A series of offsets with a minimum depth of five feet may be used to alter the façade where the total offset is at least 12 feet. The minimum length of the deepest offset shall be at least 20 percent of the façade length.
- B. Modular Offset. This is a regular offset of at least eight feet where there are four such offsets per 200 feet of façade length. The minimum length of a segment shall be no less than 25 feet.

- C. Balcony Offset. In residential structures, balconies may be used to provide the offsets. In such cases, the balconies shall have a depth of at least six feet. In addition to balconies that project from the façade, at least 20 percent of the balconies shall be recessed so that the total offset from both types is 12 feet.
- D. Curved Building. A building with a curved wall shall have a maximum offset of 12 feet per 200 feet. Where corners are curved, this shall not count toward the maximum offset.

Section 11.611 Vertical Offset

This section requires the floor area above a certain height to be less than the floor area below in order to reduce the building's shadow and shape its façade outline. There are versions for UC, UM, and U districts.

- A. Urban Core. Step backs are required at or below floor 30 and every 25 stories thereafter. The step back shall be five feet.
- B. Urban Mid-Rise. Step backs are required at or below floor 22 and are optional after that. The step back shall be five feet.
- C. Urban. A step back is optional where buildings exceed six stories. The step back shall be five feet.
- D. Tapered. The step back requirements in A and B above may be achieved with a tapered building, where the building tapers from the maximum to the permitted size at the top level.

Section 11.612 Façade Design

Buildings that provide a clear vertical emphasis on base, body, and top in terms of materials, architectural details that provide different shadows, or visual patterns in combination with trim and other detailing ensure that the building is not a smooth, flat façade with little definition.

DIVISION 11.700 HARMONY AND DIVERSITY

Section 11.701 Purpose

In urban areas, redevelopment involves refurbishing the façades of existing buildings or tearing down and replacing them with new structures. In both cases, the character of a block can be damaged by ignoring the design of existing buildings' façades, destroying the unity of the existing façade and degrading its character. This division provides design controls. The jurisdiction has designated U district areas as design overlays where there is a need to retain their existing character as redevelopment or remodeling occurs.

Section 11.702 Existing Context

The applicant shall prepare color photos or color drawings of the block face elevation and identify the site proposed for development with its existing façade. A second set of drawings shall show the block with the proposed new building façade. Buildings that have had their façades modified in the past shall be identified, and where feasible the original façade shall be identified. The planning director may require the opposite side of the street to be shown where there is a consistent design or an important building that gives character to the street.

Section 11.703 Context Elements

The following elements shall be identified on a building-by-building basis.

- A. Height. The maximum height in feet is a measure of skyline consistency. The difference in height shall be expressed as a percentage by dividing the highest building height by the lowest. A difference of less than 10 percent is considered consistent. If the block has towers creating greater difference, these may be consistent if the block façade is symmetrical.
- B. Base. The first floor counts as the base of the building. The base can be defined by looking at changes in material, molding, or trim that indicate the top of the base. In some cases, façade signs or shop window height may be important to this measurement. An average difference from building to building should be less than one foot in order to be considered consistent.
- C. Style. The architectural style of each building shall be identified where it has a clear style. Modifications should be noted. A single style creates a uniform character. Where there are two or more styles, they should be reviewed as to historical compatibility.



Figure 11.703B Block face showing varied first floors

- D. Materials. The materials of the building façade shall be identified, and 90 percent shall be of similar materials to be consistent.
- E. Color. The color of the buildings, not trim, is important. Harmony is achieved when there is little contrast between buildings, with all colors in the same color range with variations in shade or tint.
- F. Window Lines. Windows serve to articulate floors. The degree to which heights of windows line up from building to building is a measure of consistency.
- G. Architectural Details. Window types, doors, and trim shall be classified, such as, for windows, double-hung, casement, mullioned, or fixed. Architectural styles shall be identified where appropriate.
- H. Street Transparency. Transparency is measured as the percentage of a ground-floor façade that is covered by window area. Where significant difference is proposed, the transparency of the upper levels shall also be calculated.

Section 11.704 Classifying Block Faces

The block faces shall be classified as harmonious, mixed, and chaotic. The analysis should focus first on height, base, and style. Where these three are consistent, the block face is considered harmonious. It would take sharply contrasting colors or materials to change this. Where height and base are consistent and styles different, compatible colors and material will provide consistency. The block face is classified as mixed when 15 to 30 percent of the block face differs significantly. All others are classified as chaotic. A classification of mixed may be converted to harmonious where a contrasting building is modified or replaced with a compatible design.

Section 11.705 Design Review

The design review is required for redevelopment in harmonious or mixed blocks. It is intended to preserve the character of harmonious blocks by ensuring that new buildings do not introduce a design that is not

consistent. In mixed block faces, the intent is to enhance the unity of the block by increasing the degree of consistency. No review is needed on chaotic block faces.

- A. Harmonious Block. The elevations should be as similar as possible to the neighboring buildings. Where the two neighbors differ, the new building design should match the larger of the two or fit with the majority of buildings in the block face.
- B. Mixed Block. The design should relate to adjoining buildings or advance the unity of the block as a whole, whichever is determined will most improve block face harmony.

Section 11.706 Transparency

Transparency is regulated in U and AU districts. In the U district, it applies to blocks where the dominant ground-floor use is commercial. In the AU district, it applies to shopping centers where uses front on a sidewalk or pedestrian precinct. Streets are more pleasant for the pedestrian where each building has windows that display goods sold within or allow one to see into public use areas. This section requires a degree of transparency to create a more enjoyable commercial area. The measure of transparency is the percentage of the ground-level street façade that is shop windows or other windows. The minimum permissible transparency is 65 percent. In centers or block faces, an average of 75 percent transparency shall be maintained. The following rules govern transparency.

- A. Measuring Transparency. The height of the street façade or pedestrian precinct façade of a building is measured from street level to one foot above the top of ground-floor windows or doors, whichever is greater. The area of windows and glass doors divided by the street façade area determines the transparency.
- B. Parking Structures. Seeing the cars in a parking structure does not meet the transparency requirement. These uses shall meet the provisions of this section on all façades facing streets. This shall be achieved with ground-floor commercial, service, or office uses that occupy 80 percent of the at-grade façade.
- C. Barriers to Transparency. Certain uses or buildings have legitimate reasons for not having adequate transparency. The following are acceptable reasons.
 - 1. Theaters and museums have interior uses where transparent walls would detract from the use of the space.
 - 2. In narrow stores on corners with two street faces, windows on long walls create potential use problems. Stores need double-sided shopping aisles. Where more than 20 percent of shopping aisles would be single-sided, alternatives to transparency are permitted.
 - 3. Kitchens, restrooms, and storage areas alternatives to transparency are permitted.

Section 11.707 Alternative to Transparency

Transparency is intended to provide interesting pedestrian environments. There are other ways to deal with long walls that provide an interesting pedestrian environment by treating the wall or sidewalk area. The following are acceptable alternatives that may be used to meet the transparency requirements.

- A. Mixed Alternatives. Options B through H are intended to be used in combination with another option. Options E through H require that all or a portion of the building's façade be set back to provide space for the installation. The entire width of the sidewalk shall be preserved for pedestrian movement.

- B. **Poster or Display Boxes.** This applies to movie theaters, museums, and small corner stores. Displays boxes are glass-faced displays that are shallow, suitable for posters or displays of goods sold in the interior. There is no minimum size, but size should be such that pedestrians can read any text easily from several feet away. They are designed to be periodically changed from the exterior. To qualify, there shall be display boxes that average seven square feet in area and occupy at least 30 percent of the façade length, distributed approximately evenly.

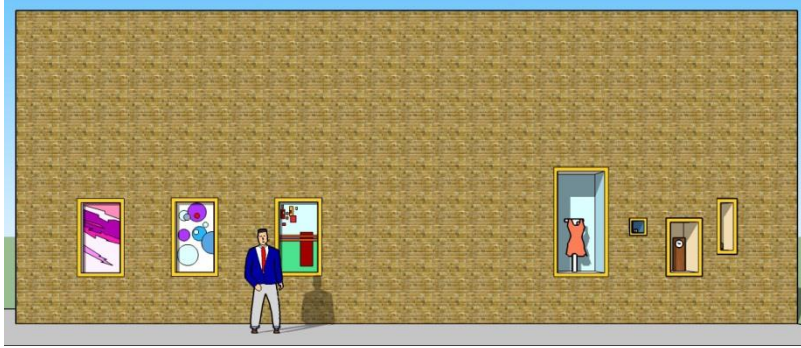


Figure 11.707B Poster or display boxes

- C. **Architectural Articulation.** This is done by changing the plane of the façade by at least six inches in order to emphasize the structure. The offset may be done in increments of at least two inches to create a more detailed pattern and increased for longer or taller buildings. Offsets along the entire façade of at least 18 inches or sinuous façades also meet this standard but result in some loss of floor area. This applies to any blank wall.

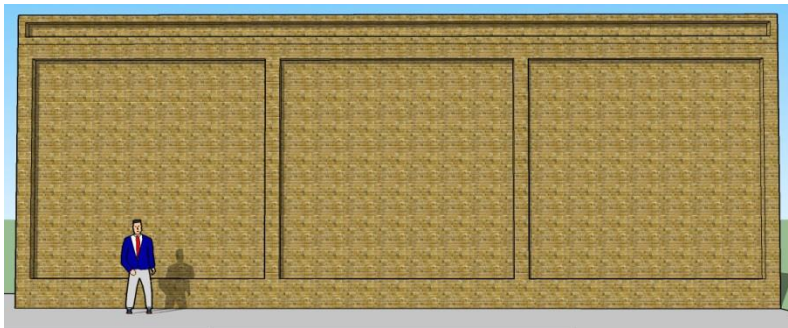


Figure 11.707C Articulation of the architectural structure of the building

- D. **Patterned Materials.** Using different colors, types, or orientation of materials can alter the wall character and provide interest. Different materials such as brick and tile, stucco and tile, or brick and stone can be used to create patterns. Materials that are embossed or carved to create three-dimensional patterns offer another possible approach.

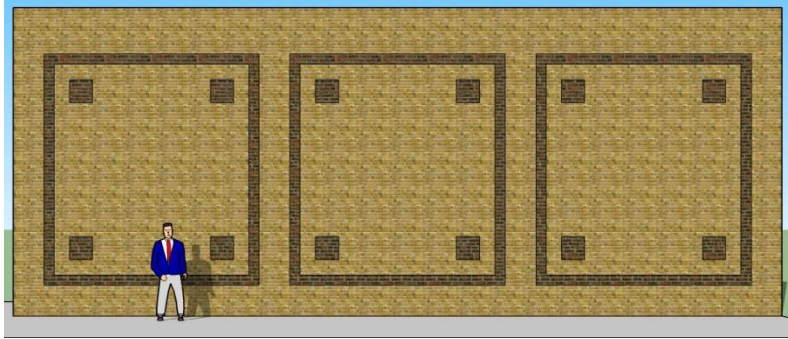


Figure 11.707D Patterns in the façade material

- E. Planters. This approach involves planting trees, shrubs, vines, and flowers in planters. At least one tree plus other material is required per 80 feet of length, in addition to required street trees. This is suitable for movie theaters, museums, or corner stores with more than 120 feet of frontage, and for the walls of big box stores where there is parking and a sidewalk on that side of the building. This option works well with offset or sinuous walls (C above).



Figure 11.707E Landscaping in planter boxes or sidewalk planters

- F. Furniture. Additional sidewalk area may be used for street furniture, including benches, clocks, and decorative sidewalk lighting fixtures. Transit stops with seating and weather protection also meet this provision.
- G. Art. Elements such as freestanding sculpture, sculpture set into the wall, murals, and fountains can be used to provide interest where there is additional sidewalk area, so the required sidewalk width is left clear for walking.
- H. Child Play Area. On secondary streets, where possible, a building's façade can be recessed by eight feet in order to create a child play area of 80 square feet.

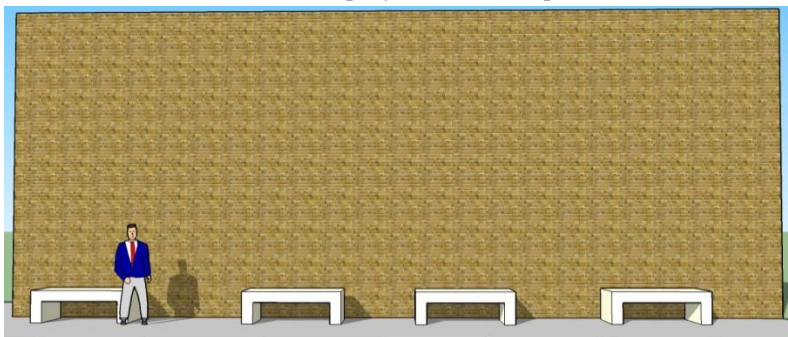


Figure 11.707F Seating benches

- I. Approval. Any façade that meets the transparency standards shall be approved. The approval of alternative designs that do not meet the transparency standards shall be based on the use of a combination of elements to create a street or pedestrian precinct façade that provides visual interest and pedestrian activities. Where windows exist, but do not meet the transparency standard, only the blank wall area requires the transparency alternative treatment.

DIVISION 11.800 HISTORIC DISTRICT DESIGN STANDARDS

{Sidebar}

The following language is largely illustrative in terms of design because each community will have very different historic districts. A key element is the identification of the style of architecture that is being preserved. The jurisdiction needs to accurately describe the architectural styles and Virginia Savage McAlester, A Field Guide to American Houses, rev. ed. (New York: Knopf, 2013) is strongly recommended. Section 11.802 is illustrative of language needed to describe a district. Section 11.806 is needed where vacant lots exist in the district or where there are a significant number of buildings that are so deteriorated that demolition may occur and would be useful where additions are requested.

{/Sidebar}

Section 11.801 Purpose

The purpose of this district is to provide the design standards for the Historic Overlay (HO) district that is zoned NC₈ and NC_{5.5} lying between Boston Street and Detroit Streets from 17th to 20th Streets. The district has been designated as historic in the National Register of Historic Places. The standards in this division are intended to preserve these buildings' historic character and to promote their maintenance in those styles. All building permits shall be reviewed by the historic commission and building official. The building permit shall not be issued before approval by the historic commission as being true to the styles.

Section 11.802 District Character

The buildings in this area are Queen Anne's and Stick Victorian, which warrants the historic designation. The colors in the district are various whites and very pale grays or tans. The {Insert} (jurisdiction name) {/Insert} application for designation contains a description of each of the historic building as of the date of designation. Exceptions for buildings that do not qualify as historic are noted by address in the resolution creating this district. National register information is available on file in the planning department.

Section 11.803 Review

All applications for building permits in the district shall be reviewed and approved by the historic commission in addition to the building inspector. The review shall look at the features of the building and determine which of the two styles it is and note any elements of the existing building that may deviate from that style. This includes bases or foundations, siding materials and construction, architectural elements, and roof. It also requires a review of individual elements such as doors, window, trim elements, and the color of the building. Each review shall note the condition of the structure, design elements missing or different from the determined style. Any proposed modifications to the building shall be reviewed.

Approval shall indicate that all elements of the historic style have been maintained, and any additions or elements of the existing building that are not consistent with the style to be restored. The historic commission may require specific changes to the plans to ensure that the building's historic character is maintained. Such change requests shall be documented as to how the change better meets the historic character.

Section 11.804 Application

The application for a building permit in the HO district shall include, in addition to the plans and elevations required for all building permits, photos of the building elevations as it currently exists. It shall also include the need for which the construction is requested and a description of how the proposed construction will improve or ensure maintenance of the building. Construction in old buildings can be expensive and historic preservation particularly so. Craftsmen capable of work on a style may be scarce. Where the building has deteriorated and requires extensive reconstruction, the costs may be a major constraint on the property owner's ability to maintain the building or make additions that are needed by the owner. The application should identify any financial concerns of the applicant that impact the owner's ability to meet the standards of this division. This shall be accompanied by costs and revenue data.

Section 11.805 Decision

In rendering a decision, the historic commission shall provide findings that the proposal meets the preservation requirements of the district and building. Any changes requested shall be specified and documented as to why they better serve the district. Any request that is denied shall be documented as to the reason for the denial and how the proposed construction would violate the character of the district and building by introduction of a foreign element. Where the owner indicates financial concerns, the historic commission is authorized to use any of the incentives found in Division 6.600 to make it feasible to preserve the structure and maintain the integrity of the HO district. The historic commission may approve the application, require changes to the design, or deny the design. Documentation shall reference Virginia Savage McAlester, *A Field Guide to American Houses*, rev. ed. (New York: Knopf, 2013), original material from the designation of the unit on the national register, and concerns of the architects or builders on the historic commission.

Section 11.806 New Construction

Vacant lots in the HO district may apply for building permits to build dwellings that have a Queen Anne's or Stick Victorian character. They shall provide plans, elevations, and a description of how the proposed design adheres to the style. This shall document treatment of the base or foundations, siding materials and construction, architectural elements, roof, and building color. It also shall indicate how individual elements, doors, windows, trim elements, and decoration meet style requirements. All new construction should adhere to the following conditions.

- A. Traditional Materials. All new construction shall be of natural wood, stone, or brick consistent with material used when such buildings were built. OR
- B. Substitute Materials. Substitute materials can be used under certain conditions. For example, it is permitted to use HardiePlank as a substitute for wood plank siding or to use brick that is applied to

walls with glue rather than traditional brick masonry in order to reduce the cost of new construction to match jurisdiction incomes.

Section 11.807 Demolition

Landowners of historic property may request a demolition permit. Such applications shall provide documentation of why the structure can no longer be used for residential use. The reasons must document one or more of the following, with detailed elements prepared by an architect registered in the state with expertise in historic buildings:

- A. Deteriorated Condition. The building has gone without maintenance for so long that it is financially infeasible to repair the structure, and it is currently a hazard to residents or neighbors.
- B. Cost. The cost of maintenance is so high that it is financially infeasible to recover the costs of the needed maintenance or renovations with revenues from sale or rent.
- C. Use. The structure is so large that continuance as a single-family structure and the costs of maintenance can no longer be supported by the sale or rental value as single-family.
- D. Documentation. The property has been on the market for at least 18 months, its asking price, and a record of any offers.
- E. Incentives. The historic commission's proposals for incentives to make continued use of the property feasible are inadequate.

Section 11.808 Demolition Approval

The historic commission shall review applications for demolition. In the review, they shall present the landowner with incentives that could make retention and maintenance of the building feasible. To grant a demolition permit, the historic commission shall determine the following.

- A. Unsafe. The documentation indicates that the building is unsafe and infeasible to repair. OR
- B. Infeasible to Maintain. The documentation demonstrates that it is financially infeasible to maintain the building without a significant loss in value over time.
- C. Incentives. The incentives offer will not correct A or B above.
- D. Sale. If a demolition permit is granted, the owner shall be required to seek a buyer for the land who agrees to new construction that meets the standards of the HO district, or to seek a neighbor who will buy the property and combine it with their lot or dedicate it to the jurisdiction landscaped as a tot lot or pocket park designed to enhance the character of the historic district.

ARTICLE 12 SUBDIVISION AND LAND DEVELOPMENT

DIVISION 12.100 PURPOSE

Section 12.101 Purpose

This article governs not the use or intensity of development but the process of approving plans for subdivisions and land developments. In addition, it provides a design review process (pattern book) intended to lock a plan approval to the detailed architectural and landscape design. The approval process first ensures plans meet the zoning requirements of the Land Development Ordinance (LDO), Articles 1 through 11. Second, the plans are reviewed as to site planning to ensure the best possible subdivision or land development layout. The reviews assure that all standards of this ordinance are met, that engineering provides for safety and the protection of public health, promotes developments that are desirable, attractive places to live, and that maximum protection is assured.

Section 12.102 Subdivisions

There are five types of subdivisions. All involve the process of dividing an existing parcel of land into a number of lots, open space, and the streets and utilities to serve them.

- A. Major Subdivision. This is a subdivision containing six or more lots.
- B. Minor Subdivision. A subdivision involving two to five lots is a minor subdivision. Because of its smaller size, the review process can be simplified.
- C. Interim Development. This is a special subdivision type where landowners are permitted to do a partial development prior to sewer and water becoming available.
- D. Rural Subdivision. This is a subdivision that is partial in that it creates between two and six lots (Section 11.208) for sale or use, leaving the rest of the property in a large parcel available for future development. It is approved using the minor subdivision process.
- E. Land Transfer. This is a subdivision where a portion of a parcel is subdivided and transferred to the adjoining property (Section 12.409).

Section 12.103 Land Developments

Land developments differ from subdivisions in that they involve a building divided into separate uses or a parcel with multiple buildings that need not involve the creation of lots. Depending on size, there are major and minor land developments.

- A. Major Land Development. A development that meets one of the following criteria.
 - 1. It is over five acres in area. OR
 - 2. It takes access to an arterial street. OR
 - 3. It involves the creation of two or more buildings. OR
 - 4. It is a land development where two or more lots are created.
- B. Minor Land Development. Any development not meeting one of the criteria in A above is considered a minor land development.

Section 12.104 Pattern Book

Pattern book approval links a subdivision or land development plan with architectural drawings of the façade and landscaping drawings, to which the developer must adhere. It provides a unified plan including site plan, design, and architecture. Pattern book approval locks the design and architecture to the site plan, so that all elements must be built as presented. The pattern book approval also grants specific modulations associated with the plan (Article 10). A developer's agreement commits the developer to follow the pattern book's approved unit types, floor plans, elevations, other design guides, and signage, all of which may be more comprehensive than zoning requirements.

DIVISION 12.200 PLAN APPROVAL PROCESS

{Sidebar}

The approvals for subdivision and land development are made by the planning director and staff. There are detailed standards that guide those decisions. This prevents decisions on permitted uses from becoming political. The reason for this is that planning commissions often use their power to delay a project in order to require plan changes that are not based on zoning or subdivision regulations, but the desires of commission members.

{/Sidebar}

Section 12.201 Subdivision and Land Development Approval Stages

The approval of subdivisions and land development is intended to allow a plan to be submitted in stages. The first stage is a sketch plan with minor engineering costs, allowing the general design concept to be fully critiqued and approved. Subsequent reviews require more detailed plans, including preliminary landscaping and engineering (preliminary plat), while ensuring the developer that the concept will not be modified, except on technical issues. The final plan includes final engineering, plat, and landscaping suitable for recording and construction. The intent is to allow the developer to get an initial concept approval via a sketch plan with little investment in detailed and costly construction drawings. The jurisdiction can require modifications at the sketch plan stage rather than later, when it would require discarding costly engineering plans. The preliminary plan provides for initial review of landscape, design, and engineering elements before the detailed construction drawings are prepared. Not all stages are required for all subdivisions. Table 12.201 shows which stages are required for each type of subdivision or land development.

Table 12.201 Plan Approval Stages by Type			
Type of Subdivision or Land Development	Sketch Plan	Preliminary Plan	Final
Major	Required	Required	Required
Minor	Optional	Required	Required
Interim	Required	Required	Required
Land Transfer	No	No	Metes and Bounds
Rural	Required	Optional	Required

Section 12.202 Sketch Plan

The sketch plan is a concept plan showing the location of streets, lots, or buildings, uses, parking, natural resources, open space, and detention areas. While drawn to scale, they may be freehand drawings, with only general dimensions or typical lot standards shown. The intent of the sketch plan is to present sufficient information, so the jurisdiction can conduct a review of the concept and react with concerns about the development, its design, resource protection, potential off-site impacts, and conformance to ordinance. The approval is intended to lock in the plat design so general planning issues are resolved at this phase. The staff may approve with conditions or require a resubmission. The following conditions shall be addressed.

- A. Natural Resources. A natural resources plan and site calculation shall be required at this stage.
- B. Hazardous Materials. Any hazardous materials on the site shall be identified and a removal plan submitted. The planning director may approve the sketch plan and issue permits to eliminate any hazardous materials but hold further processing of the plans until the state environmental protection agency certifies that all hazardous materials have been removed.
- C. Infrastructure. This submission requires only access information, the location and adequacy of water supply, sewer and storm water management facilities. The need for a transportation study shall be determined in this review.

Section 12.203 Preliminary Plan

A preliminary plan shall be consistent with the sketch plan and incorporate any significant design revisions requested in the sketch plan approval. At this point, all subdivision or land development plans shall be fully developed and dimensioned. The following shall be provided.

- A. Conformance. It shall be determined whether the plan is in conformance with the approved sketch plan, or, if no sketch plan is required, make the determinations required in Section 12.202.
- B. Infrastructure. Preliminary engineering and calculations for streets, sewers, water and storm water facilities shall be submitted in sufficient detail to determine whether engineering or design elements will meet ordinance requirements.
- C. Landscape Plans. Preliminary landscape plans shall be evaluated as meeting the standards of Article 8.
- D. Special Studies. Special studies of traffic or transportation, environmental design, or other elements shall be required by the planning director.
- E. Phasing. If the project is to be built in phases, a preliminary phasing plan shall be submitted.
- F. Information. Guidance shall be provided to the developer on any things that must be submitted with the final plan.

Section 12.204 Final Plan

The final plan requires the submission of all construction engineering drawings, final landscape plans, and a final plat that is to be recorded. The following factors shall be determined.

- A. Consistency. It must be determined whether the plan is consistent with the approved preliminary plan.
- B. Engineering and Construction Plans. Final engineering and construction plans for streets, sewers, water, and storm water management shall be evaluated and approved, or changes required. Final engineering may be modified in the field with the approval of the engineer but shall require the submission of as-built drawings.
- C. Landscape Plans. Final landscape plans shall be evaluated and approved, or changes required.

- D. Traffic Studies. All entry and off-site improvements shall be reviewed and approved.
- E. Phasing Plans. If the project is to be built in phases, a final phasing plan shall be reviewed and approved.
- F. Other Documents. The property owners' association agreement and covenants for the developments shall be reviewed by the planning director and attorney. The review shall determine that the association is adequately funded.
- G. Surety. Surety that meets the requirements of Division 12.700 shall be approved and accepted by the jurisdiction.
- H. Special Taxing District. A special taxing district shall be created, covering all land in the development.
- I. Final Plat. The final plat shall be reviewed for all required signatures. This plat shall be submitted in a format required by the recorder of deeds office for filing and in electronic format.
- J. Electronic Format. All final engineering and final plat plans shall be submitted in an electronic format consistent with the jurisdiction's geographic information system (GIS). {Insert} *Specify format compatible with local GIS or in some cases other mapping system.* {/Insert}

DIVISION 12.300 SUBDIVISION AND LAND DEVELOPMENT STANDARDS

Section 12.301 Purpose

This division contains topics and standards to be addressed in reviewing a subdivision or land development.

Section 12.302 Lots

The following rules govern lot design.

- A. Lot Area. All lots shall meet the lot standards of Article 4.
- B. Frontage. All lots shall take frontage on a public street, except where units face on a mews. The lots shall meet the minimum required width at the front and rear setback lines.
- C. Street Yards. All yards abutting a street, whether intended to be front, side, or rear, shall be classified as street yards and meet the minimum standard for a street yard setback or a yard setback, whichever is greater.
- D. Side Lot Lines. Side lot lines should generally be approximately parallel, except for lots on curved streets, where radial lines are generally needed, or where irregular or flag lots are authorized in accordance with the standards of Section 10.215.

Section 12.303 Blocks

Block length is the long axis of a block. Maximum block length is related to zoning regulations and topography. In general, a block face should not exceed 12 lots where lot widths are greater than 60 feet. Where lots are less than 60 feet in width, the maximum block length should be about 600 feet. The following additional criteria govern approval.

- A. Block Width. The blocks should be two lots deep, except for urban types where interior development is needed for an efficient block size.
- B. Orientation. The short end of a block should face arterial or major collector streets. Alleys, cul-de-sacs, frontage roads, or parallel access roads shall be used to prevent individual lot access to arterials or major collectors.

- C. Topography and Physical Features. Longer blocks shall be permitted where physical conditions such as streams, drainage, slopes, or other natural resources will be protected, or to avoid requiring expensive structures to create a shorter block.
- D. Pedestrian Connections. Mid-block access across long blocks may be required to enhance connectivity or to provide access to open space. Access to commercial areas within the neighborhood may be by pedestrian or bicycle ways, rather than streets.

Section 12.304 Open Space

Open space is required in order to meet district standards for resource protection, recreation, storm water management, and bufferyards. Nonresidential development uses landscaped surfaces for these purposes. A developer may offer to dedicate any open space to the jurisdiction or other public agency. Acceptance of the open space shall be at the sole discretion of the jurisdiction or public agency, except where such land is noted as an open space, greenway, or park in comprehensive plans. In determining resource land to be protected, the highest-quality resources shall have priority for protection, unless that severely fragments woodland or wildlife corridors.

Section 12.305 Connectivity

Neighborhoods are often composed of multiple developments. Connectivity between subdivisions shall be required in order to create circulation that does not require using arterial or collector roads for internal trips within the neighborhood. No development shall connect solely as a cul-de-sac from boundary collector or arterial roads, unless there are physical barriers that prevent connectivity to other developments or vacant parcels within the neighborhood. Gated communities are required to provide connectivity (Section 13.214).

Section 12.306 Cul-de-sacs and Loop Roads

Loop roads and cul-de-sacs reduce the number of blocks and will increase block lengths. Their use shall be encouraged to preserve greenways and open space, protect natural resources, provide views of open space for residents, and/or reduce the number of connections to commercial or other nonresidential use areas.

Section 12.307 Buildings

Land development permits multiple buildings on a single parcel. Their configuration and placement shall be designed to provide adequate parking and sidewalks to access building entrances. Loading areas shall be placed away from pedestrian access and not interfere with parking. The buildings can be in a variety of shapes, from rectangles to irregular shapes. It is possible for parts of buildings and parking to be subdivided for sale purposes or made into condominiums. Where this occurs, cross-access to parking shall be required and only spaces in front of buildings may be reserved for customer parking. The planning director shall review private parking proposals and approve such restrictions if they do not create problems for other uses.

Section 12.308 Recreation

Land proposed for recreation shall be suited for recreational purposes and not be unusable due to flooding, slope, or soil limitations. Sports fields shall be on flat or nearly flat land that requires little grading.

Section 12.309 Neighborhood Plans

Areas bounded by arterial or collector roads shall be defined as neighborhoods or superblocks. Staff may prepare a neighborhood circulation plan. In rural areas, the planning director may use rural roads to define a neighborhood, since such roads will likely be reclassified as the area develops. The following principles shall be followed in preparing the neighborhood plan for adequate connectivity.

- A. Property Base. A property ownership map shall be used, and larger properties should provide the major internal roads and residential collectors. Smaller properties should not have to provide major circulation.
- B. Resources. The circulation shall be designed to avoid major crossings of streams or natural resource protection areas.
- C. Neighborhood Plan. Once prepared, the neighborhood plan shall serve as a guide in platting of individual developments. Developers may vary street layout to meet on-site needs or differing lot sizes. Stub streets shall be provided to connect to adjoining properties as shown on the plan or as relocated on-site. Locations may be altered but not deleted, unless more connections are provided to adjoining properties.
- D. Stub Streets. All stub streets shall be connected when the adjoining property develops.

Section 12.310 Circulation in Land Developments

In general, land developments do not have public streets and do not create many new properties. The following principles apply to circulation for pedestrians and automobiles.

- A. Access. Circulation must provide access to all parcels on a block, including any separate properties. Special connections may be required where existing parcels front on the arterial or collector. See Section 13.303, Temporary Access.
- B. Coordinated Circulation. Along arterials or collectors, the circulation shall provide for parallel access across multiple parcels or blocks, so that short trips do not have to use the collector or arterial. The intersections of such circulation at public streets shall be coordinated for smooth traffic flow over several blocks. The planning director shall ensure a system that works for all owners.
- C. Services. Truck access to loading and garbage areas shall be coordinated.
- D. Pedestrian Connectivity. Sidewalks shall provide access along all public streets and to the entrances of all buildings. The following rules shall be observed, where they apply.
 - 1. Where abutting residential or vacant land, pedestrian access shall be provided to residential cul-de-sacs or pedestrian ways. If the land is vacant, connections shall be provided every 400 feet.
 - 2. Where arterial or collector frontage is divided into outparcels, pedestrian connections shall be provided from the outparcels to the buildings. These shall have distinct pavement where crossing roads. See Section 11.307 for design standards.

DIVISION 12.400 SUBDIVISION AND LAND DEVELOPMENT REVIEW

{Sidebar}

This division differs from 12.300 by providing the standards used by staff when they recommend or require plan alterations to achieve better design. Most subdivision or land development plans can be improved. The standards in this division ensure that improvements are made without forcing the developer to give up density.

{/Sidebar}

Section 12.401 Purpose

The purpose of the review is twofold. The first purpose is to ensure all standards of the ordinance are met. The second is to ensure the design of a subdivision or land development is of high quality. The planning director is empowered to recommend or require plan design changes in order to achieve better design. Required changes shall be followed. Recommendations are encouraged, but a developer may opt not to make the changes. In the following sections, the areas of design review are set forth.

Section 12.402 Intensity

The plan shall be approved only if it is within the maximum density or floor area ratio (FAR) and the minimum open space ratio (OSR) or landscape surface ratio (LSR) standards of Article 3. The review may require redesign, but the redesign cannot require the loss of dwelling units or FAR permitted by the standards of Article 3. The staff may recommend increased open space that also results in an increased density that meets the standards of Article 3.

Section 12.403 Open Space or Landscaped Surface

The review shall determine that the open space or landscaped surface minimums are met. This includes district minimums and adjustments, if any, as required by Division 3.200. The staff cannot require more open space but may recommend that a developer consider providing more open space where there is a density incentive available. However, the developer may refuse the incentive. The following additional standards apply to the review of open space within the development.

- A. Park Land. Land designated on the park and recreation plan should be dedicated and accepted, except as provided below.
 - 1. The developer may voluntarily give the land. OR
 - 2. The jurisdiction shall be given six months to negotiate a purchase, or to condemn the property. If the jurisdiction fails to take these steps, the developer may develop per submitted plans.
- B. Resource Protection. The plan shall meet the minimum protection of resource requirements in Article 3 of this ordinance. The staff may require the developer to change the areas to be protected in the following circumstances.
 - 1. Where there are differences in quality of the specific resource, the higher-quality areas should be preserved, with no change in acreage.
 - 2. Greenways should be provided to link with greenways on adjoining property or to connect habitat areas where this can be achieved without lowering density.
 - 3. The plan should maximize the use of existing drainage channels for movement of storm water and to reduce the amount and cost of storm sewers.
 - 4. Staff may propose modulation (Article 10) to allow a lesser percent of a resource with lower open space requirements to be offset by a greater percentage of a resource with a higher protection level. The total acres of protected resources shall not be changed.
- C. Visual Amenity. Sub-urban and rural area plans shall seek to maximize the percentage of the residents who have direct views of open space.

Section 12.404 Bufferyards

No plan may be approved without meeting the opacity standards of Division 8.300. The staff may require changes to the bufferyards as follows.

- A. Plant Units. Staff may require the use of a different plant option with more evergreen trees in order to provide more protection in winter months.
- B. Plant Location. Staff may require individual trees to be moved to better protect neighboring properties. Approval will be based on drawings that show the increase in protection and such a move shall not be at the expense of other neighbors.
- C. Smaller Material. The standards of Section 10.216 may be applied in order to permit the use of smaller plant material in areas where there are no current or proposed neighboring developments, provided the smaller plant material will mature to the required opacity.

Section 12.405 Streets and Circulation

Circulation, street patterns, and access locations shall be reviewed for safety, connectivity, and consistency with Division 12.200, and changes required as follows.

- A. Entrances. Entrances shall be located so as to provide for the safest possible access to existing streets, based on sight distances, speed of the major road, distance to other access points, traffic volumes, and potential for signalization.
- B. Improvements. Improvements to the existing road may be required to provide turn or acceleration lanes. Signalization may be required where warrants or safety concerns require.
- C. Alignment. Four-way intersections are encouraged and, if three-way, they should be spaced to avoid offsets of less than 215 feet.
- D. Street Pattern. In general, urban areas should emphasize a nearly complete grid pattern. In sub-urban or rural areas, curvilinear or organic street patterns are generally preferred. The following additional principles should be used.
 - 1. Where radial, concentric, or another pattern is desired by developer or is part of a comprehensive plan, it may be approved, provided it is for a whole neighborhood and does not create problems at the juncture with the existing street pattern.
 - 2. Street length per dwelling unit should be reduced, provided connectivity is preserved. Excessive street length per dwelling unit due to very small blocks or small open space blocks is to be discouraged because it lowers intensity, generates excessive runoff and added maintenance costs due to increased street area.
 - 3. A pedestrian and bicycle circulation system shall be integrated into the street system. Where there are greenway opportunities, pedestrian and bicycle ways may be required to be located in the development's open space rather than on streets. Where there are longer blocks, pedestrian or bike access across the block may be required.
 - 4. Residential streets need not connect through to commercial areas in a neighborhood, but a pedestrian and bicycle way should connect any cul-de-sac or loop through to the commercial area.
 - 5. Street connections from residential to industrial are discouraged and, where provided, shall prohibit truck traffic. Where not connected, they should be subject to 4 above.
 - 6. Changes to the neighborhood street plan are permitted per Section 12.309.

Section 12.406 Amenities

The plan shall be reviewed to ensure amenities are maximized. The following principles guide the review.

- A. Landscaping. The creation of an attractive street face shall include the design of street and front yard landscaping. Open spaces other than those for recreation should emphasize natural-appearing plantings. The number of species of trees should create a diversity of plant material in order to minimize the risk of disease damaging the tree cover. The planning director may require additional species.
- B. Specimen Trees. The layout of lots and streets should seek to maximize the preservation of individual specimen trees that provide unique value to the development. On lots, the use of a building pad may be required, provided it will not alter the building's size. Islands created on streets to preserve specimen trees shall be considered open space.

Section 12.407 Residuals

With large subdivisions, land developments, or pattern book plans where there are phases that will develop over many years, residuals shall be used to track development. Residuals also assist when many developers will be involved. It is anticipated that builders will see markets changing over time. Developers proposing three or more phases or using multiple builders are required to submit and record a residual document with the final approval of each phase or plat. The approved plan shall show the maximum dwelling units, floor area, land use categories, minimum open space, and minimum preservation area for each resource on the site, as well as any recreational areas to be provided. The residual sheet shall show the amount of development and provision of open space, resource protection, and recreational space provided by the phase as well as the residuals that are available for development or required to be provided. Prior, completed phases shall be tracked, along with work proposed in the current phase. For natural resources, the remaining land to be provided shall be compared with the amount of the resource remaining. No phase shall be approved that will result in the maximums being exceeded or the minimums not being met. The following standards govern approval of a residual.

- A. Natural Resources. It must be ensured that adequate natural resources remain after completion of the phase to meet the total protection requirement.
- B. Dwelling Unit Types. These may be changed to meet demand. The developer shall provide calculations showing the impact of the change of unit mix and open space for the residuals that remain.
- C. Affordable Units. Affordable units shall be provided in each residential phase. Where the affordable units are of a type not provided in each phase, the planning director shall require that a phasing plan be provided where affordable housing is to be provided between the 15th and 75th percentile of the total dwelling units.
- D. Impact on Remainder. The planning director shall determine whether a proposal will allow the remaining land to provide the maximum permitted intensity and minimum open space and resource protection requirements. If it does not, the intensity of the remainder shall be reduced so that open space and resource protection standards are met. A developer proposing a larger lot than originally approved will result in an inability to achieve the maximum density, open space, and resource

protection. If a developer's choice is large lots, that is the cause of the reduction. In no case shall the number of affordable units be reduced.

- E. Explanation. A change shall be accompanied with a written explanation of how any increase or loss of intensity or change in use will alter subsequent phases. This ensures the developer understands the consequences of the change.

Section 12.408 Maintenance

Maintenance plans (Section 12.805) shall be reviewed along with home or property owner's agreements to ensure funding for maintenance. If the development is a condominium, the maintenance of lots shall also be covered.

Section 12.409 Agricultural Subdivision

This is the subdivision of a parcel of agricultural land in which land is transferred to an abutting property by metes and bounds and combined with the abutting property by the recording of a revised metes and bounds of that property. The planning director may approve after ensuring that no new parcel is created.

DIVISION 12.500 PATTERN BOOK

Section 12.501 Purpose

The pattern book combines the site plan approval for subdivisions or land development with building design, architectural and landscape plans. It is intended to ensure a quality design in which site planning, uses, landscaping, and building design are integrated to create a better sense of place and quality. All these elements are reviewed and approved as a unit. This ensures that the development is built to the design and architectural standards presented when the subdivision or land development plan is approved, which is not the case with subdivisions where drawing and architecture are not bound to the approval. Pattern book approval provides for the simultaneous modulations to zoning regulations that are required to achieve the proposed design. The pattern book requires detailed architectural and design control plans for buildings that are not otherwise required for subdivision or land development approval, or which may be submitted after the plan is approved. Pattern books have a site plan and architectural, landscape, and signage documents that control the overall design.

Section 12.502 Application

The submission for a pattern book approval shall be considered a major subdivision and/or land development and follow the approval process in Section 16.510. In addition, the application shall include the following information not otherwise required for subdivisions or land developments:

- A. Quality. Drawings and text indicating how the proposed plan enhances character, design, and quality of the development shall be submitted.
- B. Modulations. Any modulations to building setbacks, height, or similar zoning standards shall be requested in writing and illustrated to show the degree of change.
- C. Buildings. Elevations and materials to be used on all buildings shall be submitted. All four elevations shall be provided. The monotony design provisions of Sections 11.602–11.607 shall guide the

submissions for residential developments. Nonresidential uses shall provide a coordinated architectural and sign plan (Section 9.215).

- D. Design Guide. This is a detailed architectural guideline that supplements the elevations and provides the styles, materials, colors, roof pitches, window and door types, proportions, and special detailing or features like porches that can be used to define façade distinctions. This shall be used by staff to address any changes that are proposed over time.
- E. Signs. For nonresidential signs, illustrations and guidelines indicating permitted colors, size, font, lighting, and materials for the coordination of signs with the architectural design shall be submitted.
- F. Streets. The plan shall indicate proposed street cross sections, landscape treatments, and pavement types. These shall not reduce traffic capacity or level of service on the street, but may increase sidewalks, alter on-street parking or bicycle lanes, add medians, or otherwise alter the cross sections in Article 13.
- G. Pedestrian Precinct. This governs the design and size of sidewalks and other pedestrian areas, including pavement types, pedestrian amenities, and landscaping.
- H. Lighting. The proposed types of lighting fixtures, intensities, and glare control shall be submitted. Where dark sky is an intent, specifics in the reduction in light reflected or directed upward shall be documented.
- I. Landscaping. The landscaping specifications may be altered to provide more material and shift location.

Section 12.503 Review Criteria

The purpose of the pattern book review is to coordinate the site plan with the design of the buildings in order to create a unified plan and architecture for the development. Its focus is entirely on design and ensuring that it will provide a unified development character, adhere to the desired community character, and fit into the neighborhood. Approval, approval with conditions, or denial shall be in writing and documented with drawings or photos that identify problems and solutions.

- A. Site Plan. The site plan shall be reviewed to:
 - 1. Determine whether regulations of this ordinance are met or any modulations requested.
 - 2. If modulations are requested, determine if they provide any of the following: a transition between character types, a unique style, or a transition at project boundaries.
 - 3. Determine that the modulations do not allow a higher intensity, larger buildings on lots, or less open space.
 - 4. Determine that no adjoining properties could be adversely impacted by the proposed modulation.
- B. Use and Density. The review is prohibited from recommending changes that would prohibit permitted uses, reduce density, or decrease open space. An increase in open space along with increased density may be requested. It is permitted to require housing types to be moved around on the site to maximize exposure to open space, protect neighboring developments, improve traffic flows, or increase walkability to neighboring properties.
- C. Development Unity. The pattern book architecture creates a development that is harmonious in character and style and avoids monotony.

- D. Signage. The site plan shall include a sign design standard that coordinates with the architecture and provides unified sign style and colors that meet the standards of Section 9.216.
- E. Neighborhood Compatibility. The proposed design does not:
 - 1. Create a sharp contrast with adjoining neighborhoods or developments due to its very different style, uses, or traffic flows.
 - 2. Introduce a chaotic or monotonous character to the neighborhood or surrounding properties.
 - 3. Introduce buildings that are out of scale with adjoining properties due to mass or height. Approvals may require a transition or feathering at the boundaries.
 - 4. Introduce a more intense character type. Bufferyards may be required to mitigate any character conflicts. Moving some uses to a more interior location is an alternative to bufferyards.
- F. Architecture. In general, the architecture proposed by the developer should be permitted and the planning commission should not force its concepts, except in the following situations.
 - 1. The proposed architecture is incompatible with the regional and local architectural heritage and abutting areas where the local character is strong.
 - 2. The proposed architecture is chaotic and unattractive and would be detrimental to the jurisdiction's character and attractiveness.
 - 3. The architecture creates a different scale or community character than the zoning district.

Section 12.504 Amendment

Changes proposed to the approved pattern book shall be approved in the same manner as the original approval.

Section 12.505 Approval

The staff, in reviewing a pattern book plan, may approve it or approve it with conditions as indicated in Section 12.503. It can deny the application only if it fails to meet the ordinance standards or the developer refuses to modify the plan in accordance with the conditions identified. The following rules apply to conditions.

- A. Use and Intensity. The permitted densities and floor area may not be reduced unless there is a finding that the plan is unlikely to succeed because it exceeds reasonable growth expectations. In such cases, the scaling back of the area is preferable to reducing the intensities.
- B. Open Space. The developer shall not be required to exceed the minimum open space requirements but may voluntarily do so. The developer may choose not to use the density bonus associated with greater open space provided this is noted in the final plat.
- C. Approval. The approval may require linking residential and nonresidential portions of the plan to achieve the desired economic impact on public agencies.

Section 12.506 Amendment

The developer may propose an amendment that would reduce the overall intensity of the approved master plan. If it appears that conditions have changed and the original objectives of the master plan cannot be achieved, such amendments shall be reviewed using the provisions of Sections 12.503 and 12.504. The staff may require the submission of an amendment when one of the following occurs.

- A. Phases. Where phases intended to provide economic benefits are not being submitted or initial phases of similar development are not leasing or selling, staff may submit an amendment based upon the failure of the project to attain the positive economic impact initially proposed. Such a failure shall warrant a decision to reduce overall intensity, delay further approval, or change uses.
- B. Lack of Absorption. When a lack of market results in phases not being submitted and the planning director determines that jurisdiction or regional markets will not support the proposed development reaching its intended buildout, an amendment of the plan or vacation of vacant phases may be submitted.

DIVISION 12.600 AGENCY PLANNING

{Sidebar}

This section is optional. It requires the planning department and engineer to develop plans for corridors or neighborhoods as a guide to road locations and interconnections.

{/Sidebar}

Section 12.601 Purpose

Because development often occurs piecemeal, over time, by many developers, there is a need for the jurisdiction to provide a plan to coordinate the location and connections for access between developments. The planning department and engineer shall be responsible for the development of circulation plans in major street corridors and for neighborhoods, to better guide and coordinate the actions of multiple property owners.

Section 12.602 Corridor Circulation Plans

Where land along arterial or collector roads is zoned to permit the development of significant nonresidential uses, the planning director and engineer shall have 60 days to develop a circulation plan for that corridor. This shall be done at the time of submission of the first developments in the corridor. Such a plan may limit curb cuts and/or require access between adjoining land and parking areas. It may require parallel access roads, reverse frontage roads, and/or coordinated interior circulation among the properties in order to enable trips within the corridor to use these roads rather than collectors or arterials.

Section 12.603 Neighborhood Circulation Plan

The staff shall prepare a neighborhood plan (Section 12.309) when a developer proposes the first development or subdivision in a superblock. The planning director and engineer shall have 60 days to prepare a superblock circulation plan.

Section 12.604 Adoption

When staff prepares a corridor or superblock plan, notice shall be mailed to all property owners in the corridor or superblock included in the plan. The notice shall provide the date of the staff review meeting where comments on the plan will be heard. Staff will identify modifications it will make. The hearing shall be scheduled so that the 60-day time limit can be met. Upon making any changes, a final plan shall be sent to all landowners, made available in the planning department, and attached to the zoning map.

DIVISION 12.700 PERFORMANCE GUARANTEES

Section 12.701 Purpose

The purpose of this division is to ensure that when development is approved, all public improvements shown in the final plan and engineering plans (Articles 13 and 14) are completed, even if unanticipated events make it impossible for the developer to complete the work. This is achieved by requiring surety. Surety is a financial agreement that protects the jurisdiction and any purchasers in the event of a failure. Surety also ensures facilities are adequately maintained until they are taken over from the developer by the jurisdiction.

Section 12.702 Recording

No plat or land development may be approved and recorded until surety is approved and received. The plat or land development can then be recorded, and the land sold.

Section 12.703 Cost Estimates

The developer's engineer shall submit a cost estimate for roads, water and sewer facilities, storm drainage, detention, lighting, recreational areas and/or open space and any on- or off-site improvements. The designers of the landscapes, buffers, and/or other required landscape improvements shall submit cost estimates for those improvements. Valid bids from contractors may be substituted for cost estimates. The planning director and engineer shall review all submittal and checking for consistency with similar work to ensure they are reasonable.

Section 12.704 Surety

A surety shall be required in the amount of 140 percent of the cost estimates. Surety shall be for a period of three years, unless a longer time is requested or deemed necessary. Phased projects may submit surety in phases, provided all off-site improvements and major components identified by the engineer are in the first phase. Surety in the following forms may be acceptable: cash, performance bonds, or letters of credit, as approved by the attorney. No plat or land development shall be recorded until surety is approved and received.

Section 12.705 Improvements in Lieu of Surety

In lieu of posting surety, the developer may propose to construct all or some of the improvements prior to recording of the plat or land development and offering a property for sale. Staff shall have approved the plat or land development, but hold recording, and issue construction permits for the roads, utilities, or other elements in the approved engineering plan that must be constructed prior to recording. Upon issuance of construction permits for improvements, the developer may execute those improvements. Staff shall hold the final plat and construction permits until the work has been completed and accepted by the engineer as adequate. The jurisdiction has full discretion as to whether to accept this approach and shall determine that the developer has funds available and a contract/or equipment to do the work. Should the work not be completed, the jurisdiction shall not release the plat until surety is provided to ensure the work

is done. While construction is underway on a plat, it is exempt from any zoning amendment and right to build as platted is vested.

Section 12.706 Release of Surety

Upon completing all or part of the improvement, the developer may request a reduction or closure of the surety. The planning director and engineer shall have the development inspected. Any deficiencies shall be identified, and the developer notified in writing of those deficiencies. When the work is accepted as complete and a maintenance bond provided, the surety shall be reduced or closed. Reduction may be requested after at least 25 percent of the work has been completed, or as identified in the original phasing plan of the improvements.

Section 12.707 Extending Surety

Under normal circumstances, the developer should finish construction of improvements well before the surety expiration date. In the event that construction has not been completed at least 120 calendar days prior to the surety expiration date, the planning director and engineer shall have an inspection conducted and send a report to the developer indicating items to be completed 60 calendar days prior to the expiration. Should the developer want additional time or staff determine that the improvements will not be completed, staff shall notify the developer of their intent to call the surety. The developer may submit a new surety covering a minimum of six months or as requested by the planning director at least 60 days prior to expiration.

Section 12.708 Calling Surety

If all work is not completed or an extended surety has not been presented 60 days prior to expiration, the planning director shall notify the attorney to call the surety, so the work can be completed at no expense to the jurisdiction.

Section 12.709 Maintenance Guarantee

Upon completing the improvements, the bonds will be reduced or eliminated. Prior to that event, a guarantee shall be taken out to cover 150 percent of the anticipated maintenance for a period of two years after the completion of all improvements.

DIVISION 12.800 EASEMENTS, OWNERSHIP, COVENANTS, AND SPECIAL TAXING DISTRICTS

Section 12.801 Purpose

The purpose of this division is to regulate ownership, preserve open space, and provide for the maintenance of open space, public easements, and any private services to the development. It provides for the governance of the development after the developer is finished. It also covers private covenants and ways to ensure that needed maintenance is accomplished.

Section 12.802 Ownership

The ownership of lots, open space, public facilities, private facilities, and other areas shall be specified as private, condominium, or property owners' association.

- A. Lots. Lots may be individually owned in fee simple or be part of a condominium association.
- B. Buildings. Buildings may be owner-occupied, rented to tenants, or divided into condominium units.
- C. Open Space. The ownership of open space may be allocated in one or more of the following:
 - 1. Property Owners' Association. All property owners have an equal share with the association having responsibility for maintenance.
 - 2. Individuals. Only in developments of five or fewer lots may the open space be part of individual lots, with each owner owning that portion of the open space. The planning director shall permit this only where a conservation easement is placed on the open space in favor of the jurisdiction and a special taxing district is established to cover maintenance.
 - 3. Jurisdiction. The jurisdiction or one of its departments may accept ownership. The developer may offer some or all the open space or the jurisdiction may request land shown on the park and recreation plan to be dedicated. The jurisdiction may choose to accept this ownership or reject an offer. County, state, or national governments shall be treated as a jurisdiction in this section. The developer shall not be forced to give open space that would lower development intensity (Section 12.204).
 - 4. Open Space Organizations. Open space organizations certified by the jurisdiction to preserve open space (typically natural areas) may own open space. The organization may reach agreements with the developer for an annual fee to be paid by the property owners' association for maintenance.
 - 5. Farm, Ranch, or Timber Owners. In the CS, AG, or N district, land to be used for agricultural crops, range land, or timber tracks may be separately owned by the original owner or other owners who will continue those uses.
- D. Public Facilities. The jurisdiction shall, upon inspection and determination they meet its standards and are in suitable condition, accept ownership of all public facilities.
- E. Private Facilities. Where street, utilities, or recreational facilities are approved to be private, they shall be the owned by the property owners' association. The property owners may manage and maintain these facilities themselves or contract with qualified firms to do so. A special taxing district is required for this.

Section 12.803 Conservation Easement

All land designated as open space, including resource protection, recreation, bufferyards, and storm water management areas, or any land having sold its development rights, shall have a conservation easement recorded on the property prior to the subdivision or land development plans or plat receiving final signatures. The open space plan shall show resource protection areas, recreation areas, storm water facilities, buffers, and amenity land. The conservation easements shall be in a form approved by the attorney. All conservation easements shall run in favor of two parties: the jurisdiction, and the owners of all the lots and/or condominium units in the development.

Section 12.804 Public Easements

During the planning of a property, the jurisdiction may require the granting of a variety of easements in the open space or on private property or lots. These easements may be for any of the following purposes: drainage, utilities, access, storm water facilities, and trails. The jurisdiction or other utility provider shall have the right to remove any encroaching structures, landscaping, or improvements placed upon such public easements. Land set aside for resource protection shall not have easements, except for trails. The landowner shall not be eligible to seek damages for the removal of illegal improvements. The agency doing the work shall restore ground cover on open space land, if damaged.

Section 12.805 Maintenance Plan

All subdivisions or land developments shall have a maintenance plan that identifies the ongoing short- and long-term maintenance requirements of preserved open space, recreational areas, or other open spaces. The plan shall also provide for the maintenance of any development facilities such as roads or recreational facilities that are owned by the development. Also covered are yard and building maintenance where that is a condominium responsibility. The maintenance plan shall indicate requirements during construction, and maintenance requirements after development.

- A. Ongoing Maintenance. This involves ongoing maintenance that must occur continually or on a seasonal basis. It includes lawn mowing, leaf cleanup, maintenance of planting beds, upkeep of recreational facilities, or other such short-term requirements that range from weekly to monthly or seasonal tasks. This also includes the management and staffing of programs for the residents or owners.
- B. Short-Term Activities. Short-term activities are those required during the development period to ensure that the final landscape is well established before the jurisdiction accepts the development as complete and turns it over to the property owners' association. This includes weeding, tree replacement, eradication of invasive plants, and/or other activities to ensure the proposed landscaping shall be established and in a healthy condition prior to acceptance by the jurisdiction. The developer shall be responsible for this.
- C. Long-Term Maintenance. Long-term maintenance activities are those that are undertaken on a yearly or other recurrent basis or are triggered by identification of a maintenance problem. This includes maintenance of storm water facilities and floodplains, mitigation of storm damage, and eradication of invasive plants.
- D. Budget. A budget shall be provided that identifies expected costs for short- and long-term activities and ongoing maintenance. These shall be used to identify the proper level of property owner fees to cover these costs.
- E. Sinking Fund. A sinking fund covers large occasional costs. Where a long-term maintenance cost is to be more than 30 percent of the annual ongoing maintenance budget, a sinking fund shall be required. If roads, detention, sewer, water or other utilities are to be privately maintained, the sinking fund should cover these. The sinking fund shall provide for annual contributions that, over a period of ten years, provide for 120 percent of the total costs of long-term maintenance. After ten years, the property owners' association may petition and be granted a reduction in the annual contribution to a level that covers inflation. After a major maintenance expense, the sinking fund shall be increased to rebuild the fund and avoid a special assessment at some time in the future. An annual report of the status of the sinking fund shall be submitted to the planning department.

Section 12.806 Property Owners' Association

All subdivisions and land developments shall have a property or homeowner's association at a minimum for the maintenance of common open space and storm water management facilities. Other responsibilities shall be included if recreational facilities, private utilities, private roads, trails, condominiums, yard maintenance, or other facilities requiring maintenance are present on-site. All such agreements shall be reviewed by the planning director and attorney. The following elements are required.

- A. Responsibility. The responsibility of the property owners for maintenance, upkeep, or management shall be spelled out.
- B. Failure to Maintain. The jurisdiction, when it notices a failure to maintain, will issue a warning to the property owners' association that the maintenance must be done, and the time allowed to correct the problem. If, after a warning, the property owners fail to act in the given time period, the jurisdiction will take corrective action. The costs will be levied by the special taxing district (Section 12.807) for that calendar year.
- C. Annual Payment. Provisions for annual payments or dues by property owners shall be required.
- D. Long-Term Sinking Fund. Where water, sewer, private roads, or other facilities requiring large-scale periodic maintenance are present on-site, a sinking fund shall be provided that anticipates replacement or repair costs in the future and sets aside money to build a fund for this work over time.
- E. Officers. The officers and voting procedures of the property owners' association shall be spelled out.

Section 12.807 Special Taxing District

{Sidebar}

A concern of many communities about open space is how to ensure its maintenance. Traditionally, the only method was to place liens on property to recoup government costs. This is not an efficient way to collect money. A better solution is a special taxing district covering the development which provides the means to reimburse government costs with that year's real estate tax bill.

{/Sidebar}

Prior to recording the final plat or land development plan, the jurisdiction and developer shall create a special taxing district. The special taxing district is responsible for the maintenance of all common elements of the land development or subdivision done by the jurisdiction.

- A. Area. The entire land development or subdivision shall be included in the special taxing district.
- B. Failure to Maintain. If at any time the jurisdiction finds a failure to maintain any of the common elements, such as open space, recreational facilities, private roads, private utilities, or other common property, it shall serve notice to the property owners' association.
- C. Notice. The jurisdiction shall serve notice to the property owners' association by registered mail and email. The notice shall identify the failure to maintain and give the property owners' association 30 days to do the maintenance. If not corrected in 30 days, the property owners' association shall be given notice that the jurisdiction will do the maintenance.
- D. Emergency. If the jurisdiction determines the work represents an emergency, threatening the public health or safety, the jurisdiction shall attempt to contact representatives of the property owners by phone or email to inform them that work must begin at once and provide contact numbers to

coordinate. The jurisdiction may immediately begin to correct problems with sewerage, water supply, or road access, except where the property owners have crews on-site prior to the arrival of the jurisdiction's crews.

- E. Billing. Upon completing any work, the jurisdiction shall send a bill to the property owners' association. If not paid within 60 days, prior to the issuance of tax bills, the jurisdiction shall place the costs, including administration, plus a 10 percent fee, on the tax bill for the special taxing district.

Section 12.808 Private Covenants

Developers shall submit private covenants that apply to the owners of the land within the development to the planning director and attorney for review.

- A. Impermissible Provisions. Any covenant that would conflict with the affordable housing provisions, such as a minimum house size, shall be removed. Any other provision that conflicts with this ordinance, other jurisdictional ordinances, or state or federal law shall also be removed.
- B. Content. The covenants shall detail every restriction placed on property owners on the use of their land or maintenance of yard or building. They shall spell out the process to get dues paid, amend the covenants, seek enforcement, and shall identify the officers of the association, and their election.
- C. Enforcement. The jurisdiction shall not enforce covenants or any of their provisions. Enforcement shall be sought by the property owners' association or aggrieved individuals.

ARTICLE 13 TRANSPORTATION

DIVISION 13.100 PURPOSE

This article addresses the requirements for developers and subdividers to provide transportation infrastructure (Division 13.200), property access (Division 13.300), road capacity (Division 13.400) and parking and loading (Division 13.500). The regulations are intended to ensure infrastructure is properly designed to serve the long-term needs of the jurisdiction. It specifically provides a system of streets that promotes the efficient movement of traffic while providing access from properties to the system. The standards protect the health and safety of residents by avoiding accidents, reducing congestion and runoff, and improving health and air quality.

DIVISION 13.200 STREETS

Section 13.201 Design Objective

A system of streets must address two sometimes conflicting objectives: moving traffic safely and efficiently and providing access to land uses. Access slows traffic and creates hazards with turning movements. The conflict is resolved by a classification of streets. At one end are streets whose primary function is the movement of vehicles at higher speeds across the jurisdiction and region, with controlled access. At the other end are local streets whose speeds and volumes are low and provide unrestricted access. Intermediate roads move traffic from local roads to regional roads.

Section 13.202 Circulation Plan

The comprehensive plan contains a thoroughfare plan that shows the long-term planning for the jurisdiction's ultimate street system. The street classification on the zoning map is the official regulatory version of the thoroughfare plan.

Section 13.203 Street Classification

Streets are classified on the zoning map as limited-access/freeway, major arterials, minor arterials, collectors, residential collectors, local streets, and local nonresidential streets. Alleys are also represented on the zoning map. The purpose and function of each is contained below.

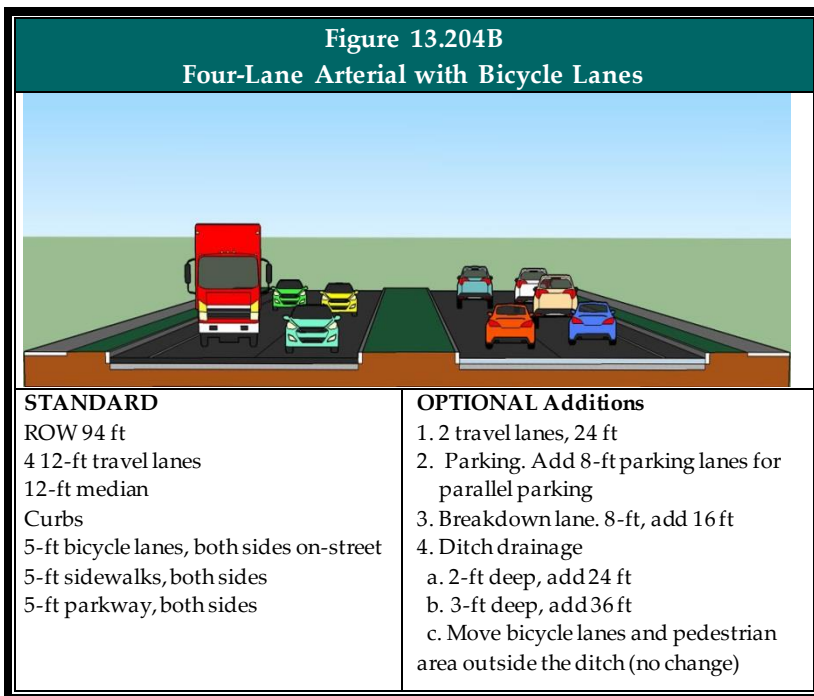
- A. Limited-Access/Freeways. Most of these roads are intended to provide interstate traffic at high speeds, with few access points. A local limited-access road or parkway is designed to provide free-flowing traffic in a specific corridor. Interstate, state roads, or parkways where all intersections are grade-separated provide access only to other freeways or arterials. Neighboring landowners have no right of access to these roads. The operators shall have the right to refuse or permit access, if requested by a property owner or governmental agency. Any access permitted shall be right-turn, in and out, or involve an overpass.
- B. Major Arterials. The purpose of major arterials is to carry high-volume regional traffic at relatively high speeds. The jurisdiction strongly limits access to these roads in Division 13.300. State and US highway access must be approved by the state's department of transportation. These are typically four or more lanes, and intersections will often be controlled by lights.

- C. Minor Arterials. The purpose of minor arterials is to carry moderate volumes of regional or jurisdiction traffic at moderate speeds, providing greater access to property owners. These are typically four lanes but may be enlarged as development in an area occurs. Access may be restricted to street intersections and may require signalization or access restricted to right-in/right-out. Internal circulation of adjoining properties is required.
- D. Collectors. Collectors are intended to move traffic from local streets to arterial-level roads and while the roads may be continuous, they are designed for moderate speeds and frequent access by adjoining property owners. The right-of-way is for four-lane roads even when there are only two lanes.
- E. Residential Collectors. These are collectors within residential neighborhoods which limit access in order to carry higher levels of traffic without conflict with individual driveways.
- F. Local Commercial Streets. These are streets in nonresidential subdivisions, typically office, business, or industrial parks and commercial centers with public or private roads. The travel lanes are wider to accommodate truck traffic.
- G. Local Streets. These are streets in residential subdivisions or land developments that provide individual access to all residential properties at slow speeds and where traffic volumes are limited to no more than 240 trips per hour to ensure pedestrian safety. Widths are varied to minimize impervious surfaces.
- H. Alleys. These are mid-block minor-access ways that provide access to garages in residential areas and loading or garbage collection in nonresidential areas.

Section 13.204 Arterial and Collectors

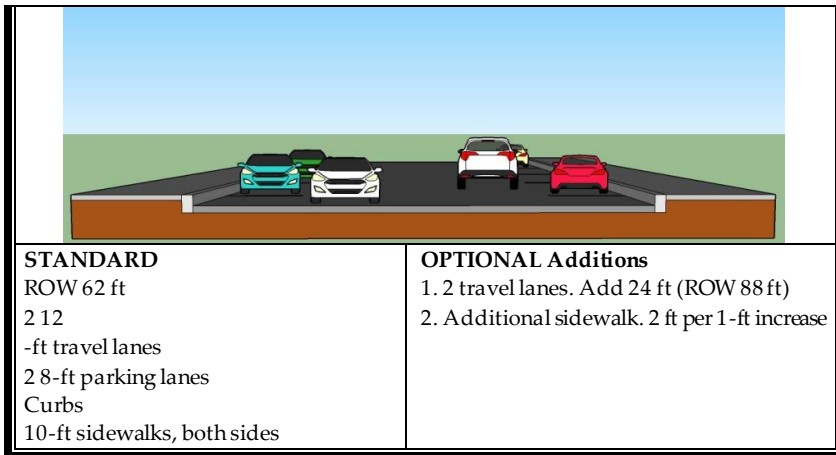
The street cross sections herein shall be required for all new construction of arterials and collectors in the jurisdiction. The right-of-way shown shall be provided as a dedication during land development or subdivision. The following rules apply.

- A. Right-of-way. Where the arterial or collector is an existing road, the developer shall provide the required future right-of-way.
- B. Arterials. The standard four-lane arterial is shown in Figure 13.204B. It contains no parking and has curbs and bicycle lanes. The planning director or engineer may require parking lanes and determine whether the curb or ditch design is appropriate.
- C. Collector and Local Commercial Streets. The cross sections of these streets are shown in Figure 13.204C. The standard collector provides for up to four travel lanes, as shown. The standard cross section has sidewalks and parkway. The planning director or engineer shall determine whether parking is permitted, and whether bicycle lanes are required. In urban commercial areas, there is no parkway, only sidewalks. Landscaping is in planters on the sidewalk.



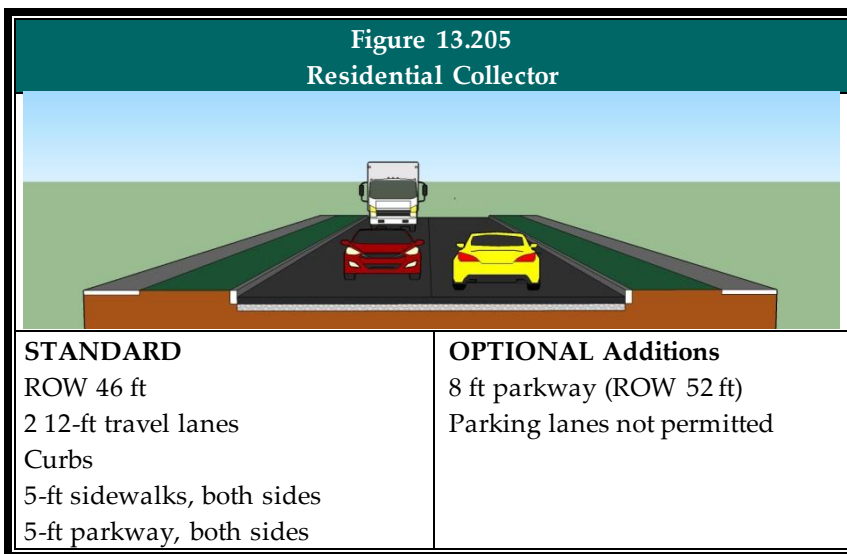
~~Collector and Local Commercial Streets. The cross sections of these streets are shown in Figure 13.204C. The standard collector provides for up to four travel lanes, as shown. The standard cross section has sidewalks and parkway. The planning director or engineer shall determine whether parking is permitted, and whether bicycle lanes are required. In urban commercial areas, there is no parkway, only sidewalks. Landscaping is in planters on the sidewalk.~~





Section 13.205 Residential Collectors

Residential Collectors are two-lane roads which only intersect with streets. All single-family, two-family, or attached single-family dwellings take access on generally perpendicular local residential streets (Figure 13.205). Only multifamily developments of 20 or more units may take access from a residential collector.



Section 13.206 Residential Streets

Residential streets are local streets that have no more than two travel lanes. Peak-hour traffic is limited to no more than 240 cars per hour. The width of a residential right-of-way is determined by the maximum number of units served, lot frontage, and type of drainage, as shown in Figures 13.206A and B. Residential units are assumed to have garages that take access from the street.

Figure 13.206A – Residential Travel Lanes


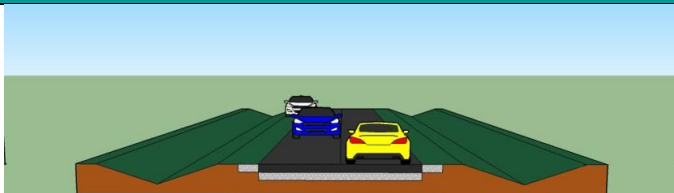
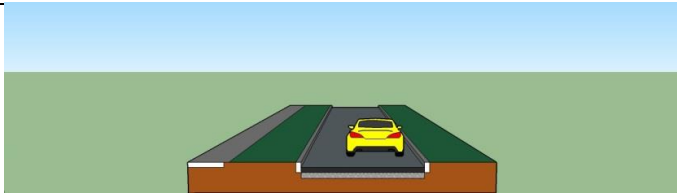
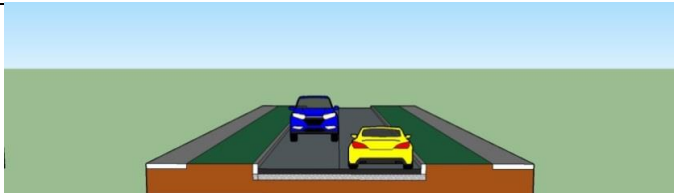
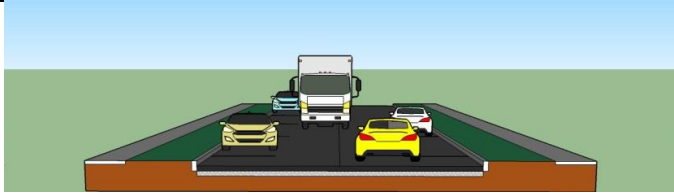
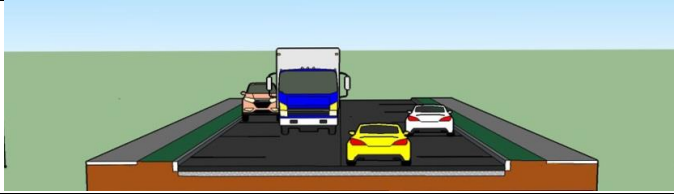
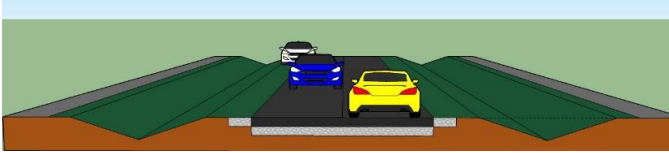
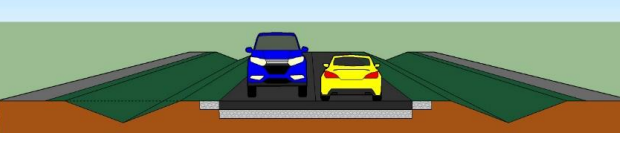
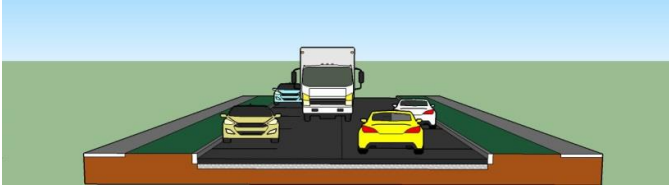
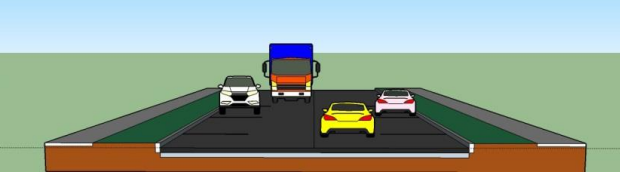
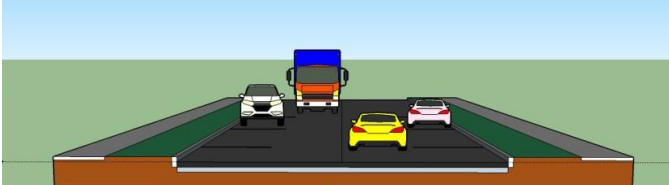


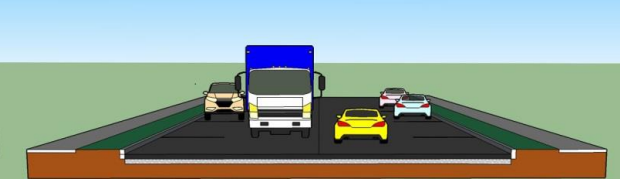
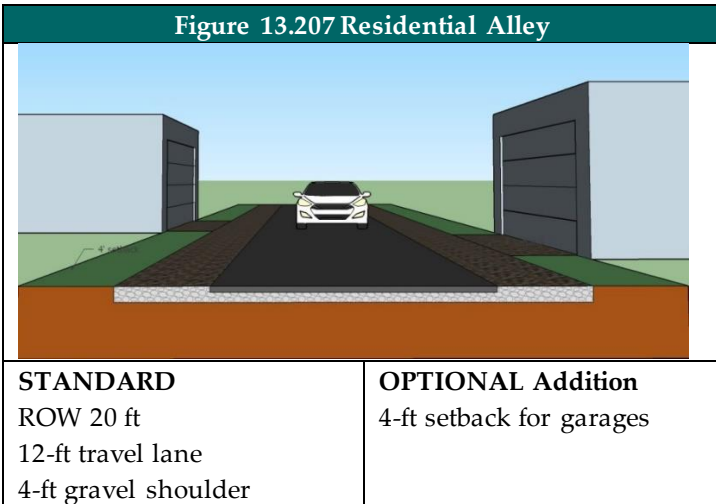
Figure 13.206A – Residential Travel Lanes		
Unit Frontage	10 or fewer units with 1 travel lane	11–30 units with 2 travel lanes
Frontage Greater than 120 Ft / Ditch Drainage / No Sidewalks Off Right-of-Way Trails		
	Right-of-way 44 ft – Pavement 12-ft, single lane. 4-ft shoulders with 2-ft reinforced. 12-ft ditches.	Right-of-way 48 ft – Pavement 16-ft, 2 8-ft lanes. 4-ft shoulders with 2-ft reinforced. 12-ft ditches.
Frontage Greater than 90 Ft / Curbs and Storm Sewers / Sidewalks		
	Right-of-way 30 ft – Pavement 12-ft, single lane. 6-ft parkways both sides. 4-ft sidewalk, one side.	Right-of-way 38 ft – Pavement 16 ft, 2 8-ft lanes. 6-ft parkways and 4-ft sidewalk, both sides.
Frontage Greater than 50 Ft / Curbs and Storm Sewers / Sidewalks	NOT PERMITTED	
		
		Right-of-way 50 ft – Pavement 28 ft, 2 10-ft travel lanes, 8 ft parking. 5-ft parkway and 5 ft sidewalk, both sides.
Frontage Greater than 32 Ft / Curbs and Storm Sewers / Sidewalks	NOT PERMITTED	
		
		Right-of-way 60 ft – Pavement 32 ft, 2 12-ft travel lanes, 8 ft parking. 5-ft parkway and 5-ft sidewalk, both sides.

Figure 13.206B - Residential Travel Lanes (continued)

Unit Frontage	31–60 units with 2 travel lanes	61–240 units with 2 travel lanes
Frontage Greater than 120 Ft / Ditch Drainage / No Sidewalks Off Right-of-Way Trails	 <p data-bbox="520 440 1184 493">Right-of-way 60 ft – Pavement 20 ft, 2 10-ft travel lanes. 4-ft shoulders with 2 feet reinforced. 12-ft ditches and 4-ft sidewalks, both sides.</p>	 <p data-bbox="1234 440 1850 493">Right-of-way 66 ft – Pavement 24 ft, 2 12-ft travel lanes. 4-ft shoulders with 2 ft reinforced. 12-ft ditches and 5-ft sidewalks, both sides.</p>
Frontage Greater than 90 Ft / Curbs and Storm Sewers / Sidewalks	 <p data-bbox="520 721 1184 769">Right-of-way 50 ft – Pavement 28 feet, 2 10-ft travel lanes. 1 8-ft parking lane. 5-ft parkway and 5-ft sidewalk, both sides.</p>	 <p data-bbox="1234 721 1850 769">Right-of-way 54 feet – Pavement 34 feet, 2 10-ft travel lanes. 2 7-ft parking lanes. 5-ft parkway and 5-ft sidewalk, both sides.</p>
Frontage Greater than 50 Ft / Curbs and Storm Sewers / Sidewalks	 <p data-bbox="520 969 1184 1018">Right-of-way 56 ft – Pavement 34 ft, 2 10-ft travel lanes. 2 7-ft parking lanes. 5-ft parkway and 5-ft sidewalk, both sides.</p>	 <p data-bbox="1234 969 1850 1018">Right-of-way 58 ft – Pavement 36 feet, 2 10-ft travel lanes. 2 8-ft parking lanes. 5-ft sidewalk and 5-ft parkway, both sides.</p>
Frontage Greater than 32 Ft / Curbs and Storm Sewers / Sidewalks	 <p data-bbox="520 1218 1184 1266">Right-of-way 60 ft – Pavement 38 ft, 2 11-ft travel lanes, 2 8-ft parking lanes. 5-ft sidewalk and 5-ft parkway, both sides.</p>	 <p data-bbox="1234 1218 1850 1266">Right-of-way 62 ft – Pavement 40 ft, 2 12-ft travel lanes. 2 8-ft parking lanes. 5-ft sidewalk and 5-ft parkway, both sides.</p>

Section 13.207 Alley-Access Residential Street

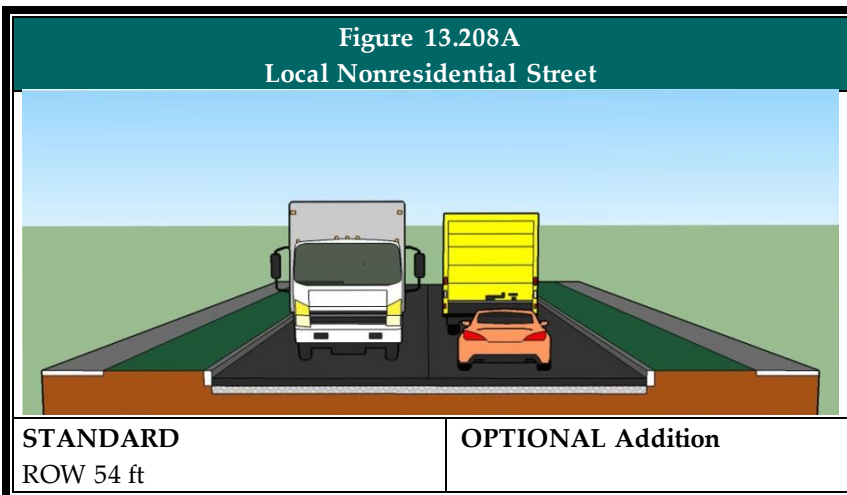
In developments with alleys where garages take access from the alleys (Figure 13.207), there is no change in the standards based on frontage. Alley access means the entire block frontage is available for parking regardless of lot width.



Section 13.208 Local Nonresidential Streets and Alleys

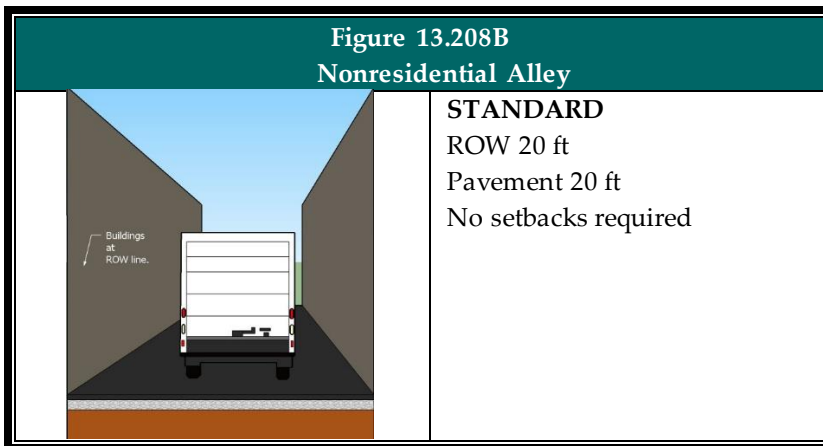
The local streets and alleys are governed by this section.

- A. Local Streets. Local streets serving nonresidential or mixed uses are designed to provide for truck traffic and thus use larger travel lanes to facilitate the turning movements of large trucks. Parking on streets shall be approved by the planning director based on the uses served. In retail areas where more than two travel lanes are required, they shall be designed as collectors.



2 15-ft travel lanes	Parking lanes, if permitted, add
Curbs	9 ft (ROW 62 to 70 ft)
4-ft sidewalks, both sides	
7-ft parkway, both sides	

- B. Nonresidential Alleys. Alleys are dedicated as 20 feet in width with no building setback (Figure 13.208B). If larger trucks are commonly used to serve the use proposed, the engineer may require wider rights-of-way. Where there is more than one loading dock, the planning director may require a loading area on the lot to avoid blocking the alley.



Section 13.209 Mews

A mews is a pedestrian-only residential street where vehicular access to dwelling units is via an alley, as shown in Figure 13.209. Mews create a more pedestrian-friendly and walkable residential environment and reduce conflicts between pedestrians and automobiles. Developers may create a mews development pattern during the subdivision process. The following rules govern the creation of a mews system.

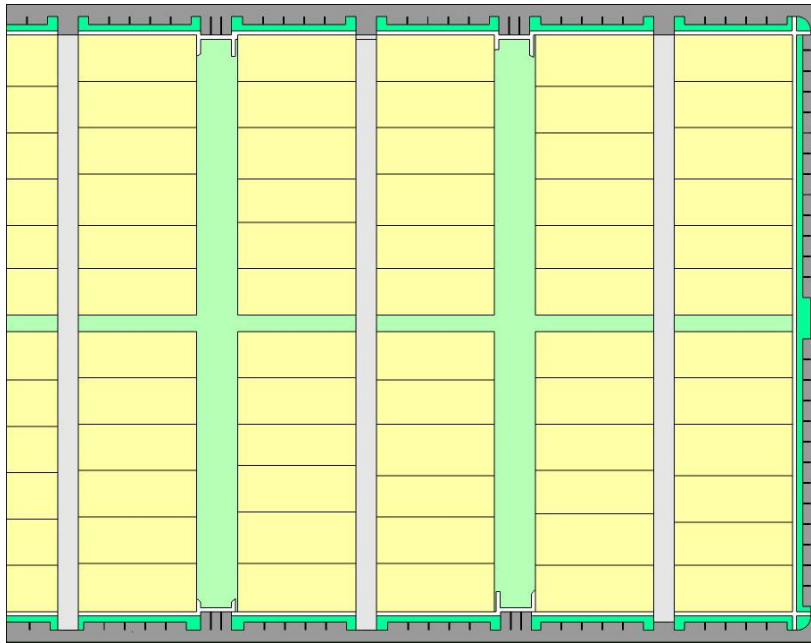


Figure 13.209 Two streets are made into mews for pedestrians

- A. **Creation.** At least two blocks shall be used to create a mews, with one or more streets converted to pedestrian-only traffic.
- B. **Alignment.** The streets parallel to the mews permitting automobile traffic shall be continuations of the street and block pattern of the area. The mews can align with existing or new streets or may be offset.
- C. **Width.** The width of a mews shall be at least 40 feet.
- D. **Length.** The maximum length of a mews may be varied but should not exceed 12 single-family lots or 20 townhouse type lots. The streets perpendicular to the mews should align with existing or future streets.
- E. **Sidewalks.** The design of the mews shall include sidewalks with a total width of at least eight feet. The rest of the mews may be grass or other ground cover, or recreational space. Where the mews exceeds 400 feet, a perpendicular pedestrian access of 20 feet shall be provided to reach streets with automobile traffic, as shown in Figure 13.209.
- F. **Border Streets.** Border streets carry automobile traffic and must have parking on both sides. The use of angled or perpendicular parking should be considered in order to provide adequate on-street parking.
- G. **Landscaping.** The mews are considered open space and shall meet open space landscaping requirements.

Section 13.210 Cul-de-sacs

Cul-de-sacs are permitted to serve a maximum of 20 single-family or two-family dwelling units. Up to 32 attached single-family units are permitted on a cul-de-sac. All cul-de-sacs shall have a planted island in the center to reduce the impervious surface in the development. In general, cul-de-sacs are circular or teardrop-shaped. Rectangular or irregular shapes are permitted where used to produce a larger usable open space. All cul-de-sac islands may be counted as open space. The following additional rules shall apply.

- A. Connectivity. Cul-de-sacs shall not be permitted to create isolated developments (Section 12.305).
- B. Open Space. Cul-de-sacs are desirable where their use creates open space to serve a group or cluster of dwellings and provides both front and rear views of open space.
- C. Greenways. Cul-de-sacs are desirable where their use results in the creation of greenways that are not frequently crossed by streets. Pedestrian access should cross the greenway.
- D. Cul-de-sac Radius. The minimum radius of a cul-de-sac shall be 60 feet.
- E. Island Radius. The minimum radius of the island shall be 25 feet for the turn-around. Islands may be teardrop shapes with a minimum inner curb radius of 10 feet. The fire department may require a greater turn radius where it is demonstrated that existing equipment cannot negotiate the cul-de-sac.
- F. One-Way. The planning director may require one-way circulation around the island to reduce the use of pavement.
- G. Existing Vegetation. Where there are existing healthy trees greater than 10 inches Diameter at Breast Height (DBH) near the terminus of a cul-de-sac, the planning director may require a greater radius, shape change, lot configuration, or different alignment to preserve trees in the island.

Section 13.211 State and Federal Roads

The ultimate approval of rights-of-way and cross sections on state or federal roads shall be made by the state. The planning director shall work with the state's department of transportation to get state or federal arterial streets to match the standards in Section 13.204A. The sidewalk placement and landscaping requirements shall meet this ordinance, but pavement and lane configurations shall be built to state or federal standards.

Section 13.212 Private Nonresidential Streets

Private nonresidential streets shall be approved only pursuant to the rules of this section.

- A. Shopping Centers. Private streets are permitted in shopping centers or other retail commercial developments where the internal road system functions primarily to move cars to available parking near the user's destination. These roads shall provide two full lanes of traffic and a fire lane. Sections leading to the adjoining public streets shall be approved by the jurisdiction pursuant to a traffic study which reviews the adequacy of the design to handle the anticipated traffic volumes and turning movements.
 - 1. The roads shall provide two 12-foot traffic lanes and a 16-foot fire lane where it abuts building sidewalks or pedestrian precincts. A landscape island shall separate the private street from parking. A sidewalk of a minimum of 10 feet in width shall separate the building from the private street.
 - 2. The road shall be paved to city standards. It shall be maintained in good condition without potholes or other structural failings. The jurisdiction may inspect at any time and, if it finds maintenance below jurisdictional standards, require the owners to repair the road.
- B. Parks. Industrial, office, or business parks are prohibited from having private streets.
- C. Speed Bumps. Speed bumps are prohibited on all private nonresidential streets. Pedestrian crossings subject to Section 13.215C may be substituted to slow traffic in these areas.
- D. Special Taxing District. A special taxing district shall be created to insure maintenance of private roads, parking lots, landscaping, and storm water management facilities.

Section 13.213 Residential Private Streets

Residential uses may be permitted to have private streets for high-density housing in the U district and for subdivisions in the E, CS, AG, and N districts.

- A. High-Density Housing. Private roads shall be discouraged and approved for multifamily developments only when the following conditions are met.
 - 1. There shall be two 12-foot travel lanes with roll curbs and a five-foot sidewalk on one side. Where there is a common building, sidewalks are required on both sides. The common building and shall be accessible by sidewalks from all units.
 - 2. Where in-building garages are used for some multifamily units, there shall be a 12-foot setback from the travel lane to the garage door. There shall be a minimum building setback of 10 feet from the curb line.

- B. Low-Density Residential. In E, CS, AG, and N districts, private roads may be permitted to allow low-density development without overburdening the jurisdiction's ability to maintain roads, provided the following conditions are met.
 - 1. Private roads shall conform to the standards of Section 13.206 for rights-of-way.
 - 2. Private roads may be built to reduced paving standards, including tar and chip or gravel surfaces. The road base construction and drainage shall meet base standards (Section 13.216).
 - 3. The use of private roads shall not result in front yards being used for utility easements.
- C. Maintenance. There shall be a special taxing district created at the time of development to provide a mechanism to ensure the property owners' association members pay for all maintenance.
- D. Conversion. Private roads may petition for conversion to a public road. A vote by 75 percent of members shall be required to apply for conversion. The special taxing district shall be responsible for the costs of bringing the road to public road standards and making any repairs.
- E. Speed Bumps. Speed bumps are prohibited on all private residential streets. Pedestrian crossings subject to Section 13.215 may be substituted to slow traffic.

Section 13.214 Gated Developments

Gated developments are undesirable, as they are isolated from the rest of the neighborhood or community and may degrade connectivity and pedestrian movement. The following standards must be met if gated communities are to be approved.

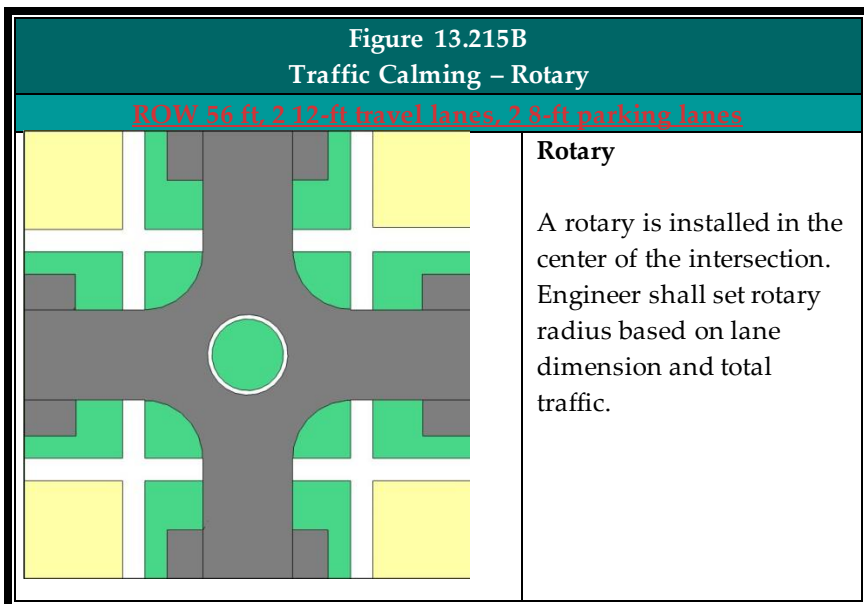
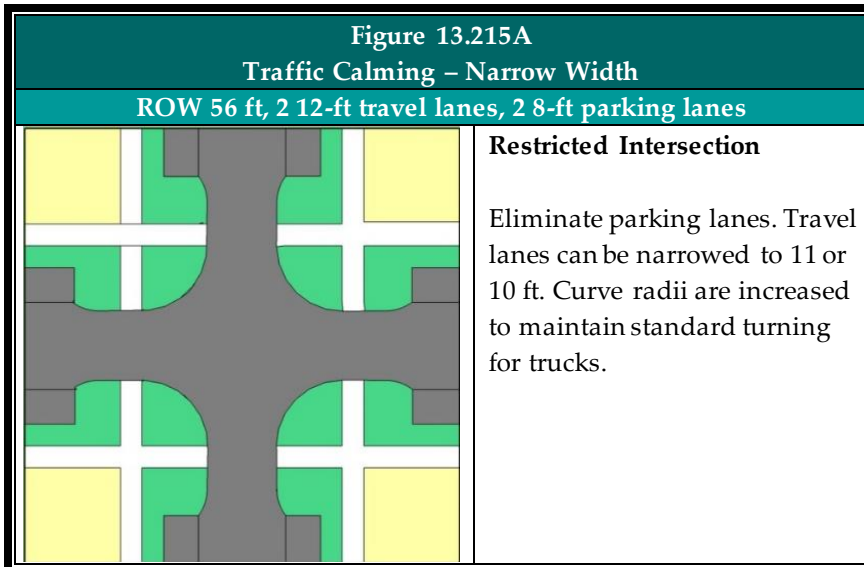
- A. Prohibition. Gated communities are prohibited in neighborhoods or superblocks where the jurisdiction has created neighborhoods and requires neighborhood signage (Section 9.217).
- B. Connections. There shall be connections to the adjoining developments within the neighborhood or superblock to meet the connectivity standards of Section 12.305. Such connections shall not be gated, and no gates shall be permitted to adjoining developments.
- C. Road Standards. All development roads shall meet public road standards but must be privately owned and maintained.
- D. Full Gated Developments. A development that is completely bordered by arterial or collector roads need only meet the requirements of C above and may use automatic gates for all but one of the entrances. It shall provide access codes to the jurisdiction, police, emergency, mail, and parcel delivery services.
- E. Special Taxing District. A special taxing district (Section 12.807) shall be created.

Section 13.215 Traffic Calming

Traffic calming is intended to slow traffic by narrowing the width of the road to discourage speed. It also allows for safer pedestrian crossings or may be used to achieve specific design objectives as well. The following types of traffic calming construction are permitted.

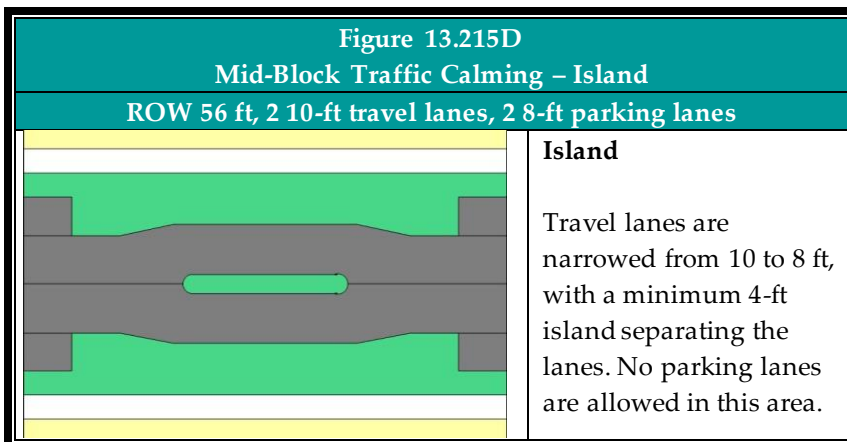
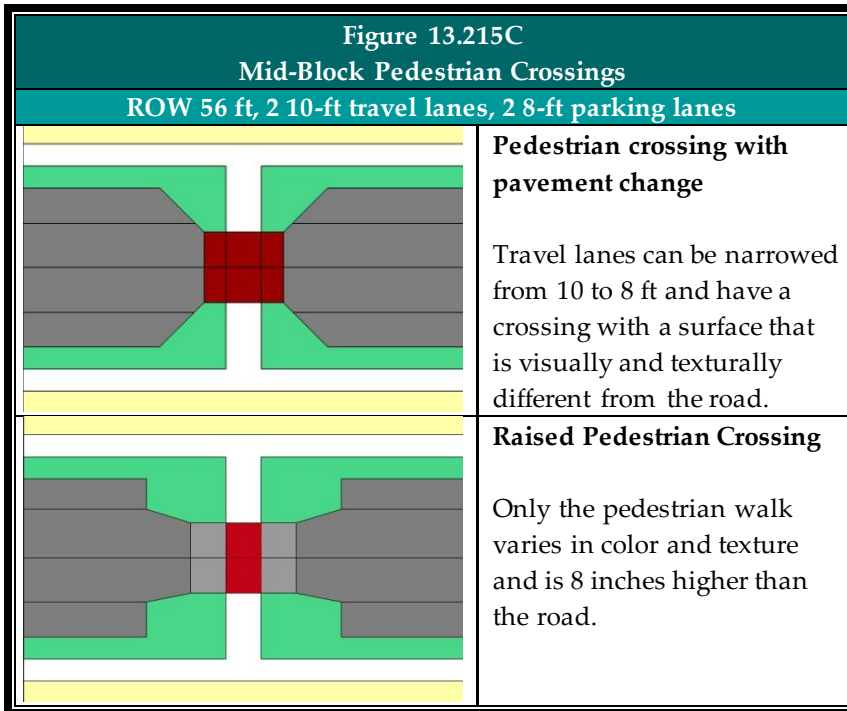
- A. Narrow Intersection. A narrowing of street width at intersections slows traffic. At a minimum, this requires the elimination of parking lanes at the intersection. Travel lanes can also be reduced, as shown in Figure 13.215A.

- B. Rotary. A rotary is a round circle island in the center of the intersection Figure 13.214B. The island radius shall be at least two feet wider than the travel lane width including curb. The island needs landscaping or other vertical elements to make it visible.

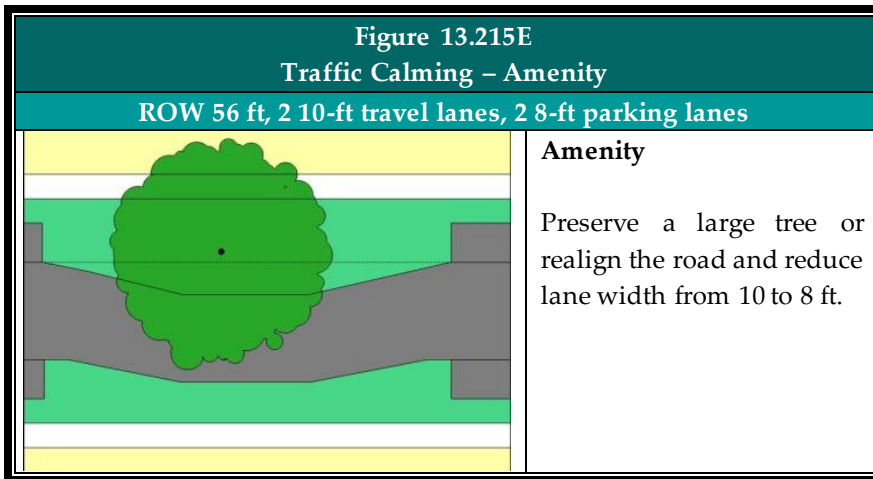


- C. Mid-Block Pedestrian Crossings. On longer blocks, a mid-block pedestrian crossing requires narrowing the travel lane by one to two feet. Parking is eliminated at and within four feet of the crossing. The sidewalk crossing the street shall be eight feet. The sidewalk shall be different in color and texture from the street. A second version allows the sidewalk to be raised by up to eight inches with a slope of no more than 4 percent.

- D. Island. This involves an island for landscaping, providing a barrier between lanes. The island may have curbs or planter boxes which provide a barrier between the travel lane, slowing traffic. See Figure 13.214D. If the island is to be at grade, the island shall be eight feet wide.



- E. Amenities. Curving the road to protect a site amenity, such as a large tree (Figure 13.215E), small building, or other feature slows traffic. This can be enhanced by eliminating the parking at that point or narrowing the traffic lane.



E.F. Stop Signs. Stop signs are not permitted on residential streets, intersections, or on residential collectors, unless the engineer and police indicate that alignment problems or a history of accidents warrants stop sign use. Yield signs may be used to control intersections.

Section 13.216 Pavements

The pavement of public roads in residential developments or new collector or arterial roads may be made of concrete or asphalt, as required by the engineering specifications for various road types. For local residential streets, there shall be a minimum of eight inches of base. For collectors and nonresidential local streets, the base shall be 10 inches. Twelve inches are required for arterial or limited-access streets or roads. Where there are soils that shrink, swell, or have limited strength, the engineer may require additional construction or base.

Section 13.217 Sidewalks

Sidewalks with a minimum width as specified in Figures 13.206A and B shall be placed on both sides of the street at the right-of-way line of all public streets, except as specified below.

- A. Cul-de-Sacs. Where the cul-de-sac serves 10 or fewer dwelling units, or loop roads serving less 20 dwelling units, a sidewalk is only required on one side.
- B. Pedestrian Ways. Where the subdivision or land development plan provides for pedestrian ways outside the public right-of-way, sections of the street where dwellings access the pedestrian ways may be exempted from providing sidewalks.

Section 13.218 Curbs

Curbs are required where there is on-street parking, or where the curbs are needed to channel storm water to storm sewers. Rural cross-sectional roads with ditches do not have curbs. They may be required by the engineer, where essential, to prevent erosion or to narrow the right-of-way in topographic conditions in order to limit cut and fill.

DIVISION 13.300 CONTROLLING ACCESS

Section 13.301 Purpose

All streets except limited-access streets must serve conflicting functions: moving traffic and providing access. The hierarchy of streets in Division 13.200 shifts the relative importance of these two functions. Access is of primary importance for local streets. Collectors lead users to arterials where some access control is required. Arterial streets have higher speeds, greater traffic volumes, and longer travel distances, and access needs to be controlled. Controlling access is important for both safety and increasing road capacity.

Section 13.302 Arterial and Collector Access

Access to arterial and collector streets and roads shall be limited per this section. The standards in Table 13.302 are based on posted speed limits.

- A. Arterials. Access to arterial roads shall, wherever possible, be taken from existing roads that intersect the arterial. Where this is not feasible or there are few existing intersections, the spacing of access, whether by existing streets, new streets, or access points, is determined by the posted speed limit, as set forth in the Table 13.302. Local nonresidential streets (D below) shall be used to provide access, rather than curb cuts on the arterial.

Table 13.302			
Arterial and Collector Connection Spacing			
Posted Speed Limit (mph)	Spacing in Feet		
	Median Break	Media Right- in/ Right-out	w/o Median
50+	2,640	800	1,000
45	1,320	800	800
40	1,000	600	600
35	800	600	400
30	600	400	300
30	300	Existing street spacing	
25	Existing street spacing		
* Assumes signal control			

- B. Collectors. Collector streets with four lanes of traffic shall follow the spacing in Table 13.302. Nonresidential streets are the preferred access. For two-lane collectors, access should be only at new or existing street intersections. Private drive connections should be at least 300 feet apart or be limited to right-in/right-out access.
- C. Local Streets. Residential developments shall have the short end of blocks on the arterial or collector in order to prohibit direct access. Parallel access, reverse frontage roads, or alleys shall be used where lots would otherwise take access to arterials or collectors.

- D. Nonresidential Local Streets. Parallel access, reverse frontage, or connected circulation shall be used to limit access to arterials or collectors, rather than curb cuts. Connected circulation (Figure 13.302D) shall be used to provide parallel roads, so that travel between developments does not require traveling on collectors or arterials.



Figure 13.302D Local nonresidential streets for access

- E. Internal Circulation. Where a major commercial node of sub-regional or regional scale is proposed, an overall circulation system per Section 12.602 shall be developed to provide a means to allow maximum circulation for that development and other properties via public or private parallel access or reverse

frontage roads, minimizing trips that need to be made using the arterial or collector streets. These roads should generally be straight streets with changes of alignment avoided.

- F. Internal Circulation Plan Approval. Such a plan shall be approved by the planning commission, either in advance of development or with the first development application. The planning department shall meet with the area landowners to review the proposed plans and provide an opportunity for input before finalizing the access system.

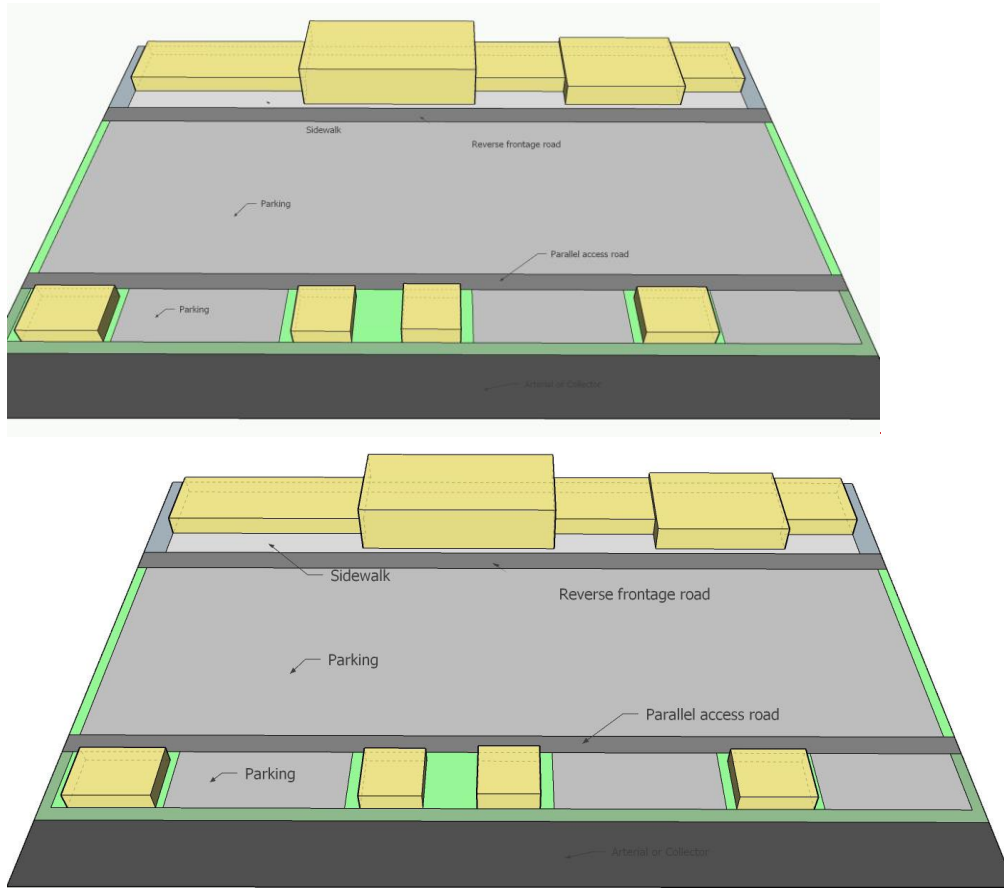


Figure 13.302E Private parallel and reverse frontage roads in commercial center

- G. New Streets or New Access. Where new streets or private connections are desired that do not meet the criteria in Table 13.302, the developer shall provide a traffic study that evaluates the impact of the proposed new connections on the arterial or collector. The traffic study shall demonstrate that the proposed connections will not degrade the movement of vehicles or greatly increase the delay gaining access. The study shall evaluate the type of connections, with median break or right-in/right-out and proposed spacing of the connections in maintaining traffic flows.
- H. Connected Parking Lots and Access. Where there are several developments along an arterial or collector, the planning director may change the location of the access to work without major turns and designate a connection design for multiple properties.

Section 13.303 Temporary Access

In situations where there are many lots with narrow frontages that cannot meet the spacing required in Section 13.302, this section shall apply. The planning director may grant temporary access permits to provide access to all the properties, subject to the following standards.

- A. Temporary Access. Access shall be provided to interior lots via a temporary access permit. The temporary permit shall expire when the property owner is given notice by the engineer.
- B. End Lots. If end lots are the first to apply they may receive a permanent access permit provided it is in keeping with the block access plan.
- C. Plan. Prior to issuing the temporary access permit or other permits in the block, the planning director shall have approved an internal circulation plan that shows end-block connections to local streets and provides connections between parking lots to permit reaching the end-of-block accesses. This may require grading of the properties to permit the connection to their neighbors if there are grade differences. The standard shall be imposed in the issuance of building and land development permits.

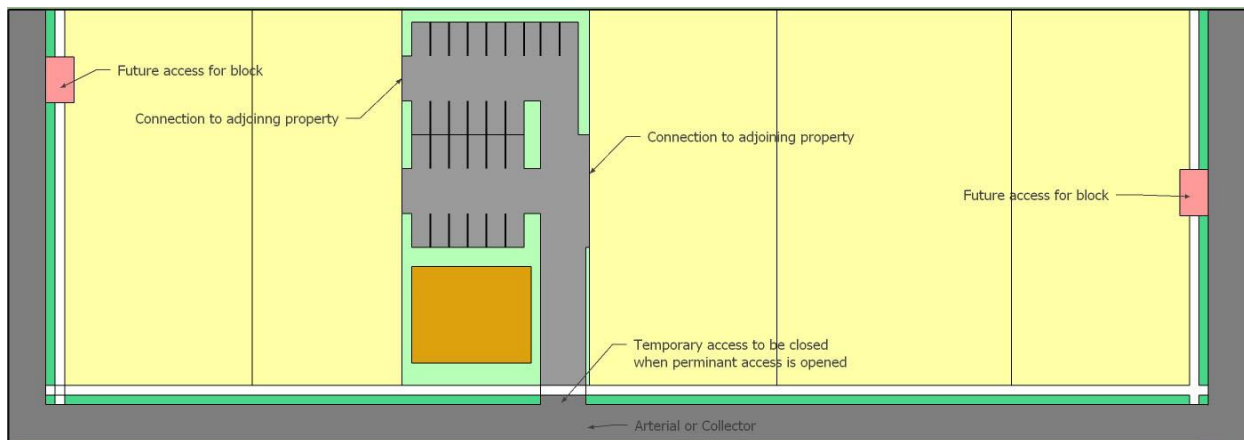


Figure 13.303 Temporary access

- D. Access. Parking lots shall permit shared parking by adjoining uses. The planning director may impose some parking restrictions where uses are particularly likely to compete for spaces, and handicapped and pickup areas may be designated.
- E. Closing Temporary Access. As parcels are connected, the municipal engineer shall determine which temporary access is safest and require the others to be closed. All shall be eliminated when access to other streets is achieved.
- F. The property owners shall submit a bond or cash to pay for the municipality to close the temporary access when notified.

Section 13.304 Residential Collectors

Residential collectors are required when a street in a neighborhood or superblock will serve more than 240 dwelling units. No single-family, two-family, or attached single-family housing types shall be permitted to

take individual access from residential collectors. The local residential streets shall be designed so that lot side or rear yards abut the residential collector.

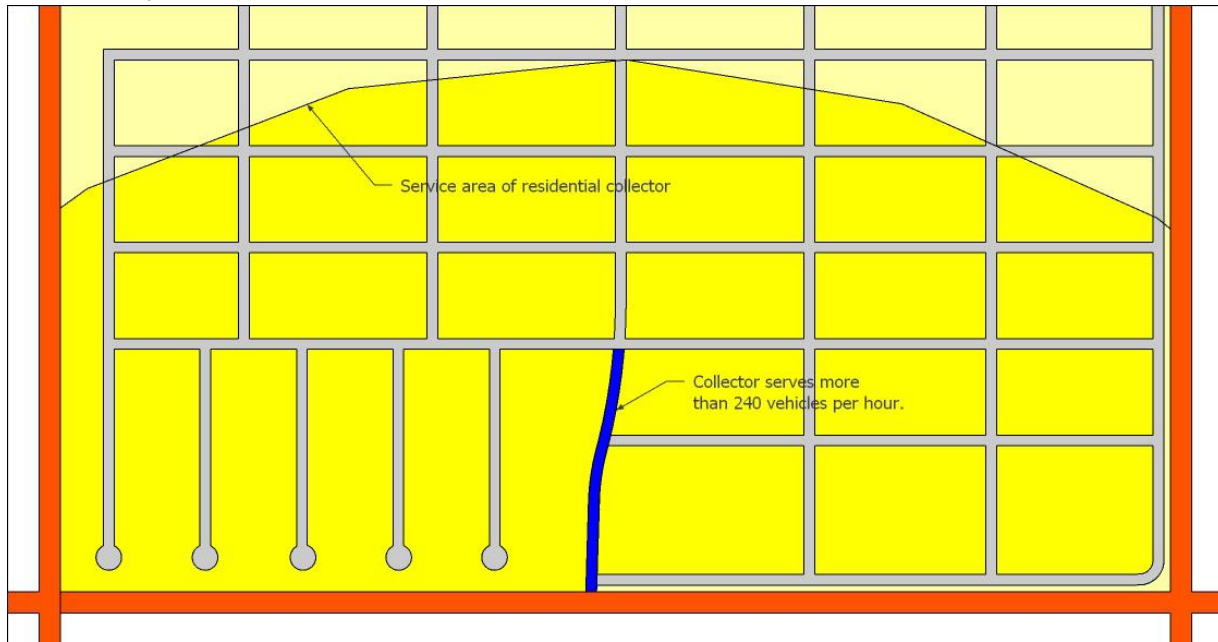


Figure 13.304 Residential collector service area

Section 13.305 Rural Residential Access

In developing areas where there is small minor subdivision activity, direct access to the existing road system is prohibited. It is likely that these roads will ultimately serve as collectors or arterials even when currently classified as local or farm service roads. All subdivision lots shall take access from new local streets that are generally perpendicular to the existing rural roads. Section 11.208 provides special subdivision rules for small-scale subdivisions that shall be used to provide access.

DIVISION 13.400 LAND USE AND ROAD CAPACITY

Section 13.401 Purpose

This division contains regulations that are intended to ensure development does not exceed the capacity of the roads to operate at a legitimate level of capacity or exceed the ability of the jurisdiction to make improvements.

Section 13.402 Traffic Studies

All residential developments with over 100 dwelling units and all commercial development generating more than 100 peak-hour trips shall be required to submit a traffic study. The traffic study shall be conducted by a registered engineer specializing in transportation or traffic. The study shall include the following information.

- A. Traffic Counts. Traffic counts and turning movements shall be collected on adjoining roads. If traffic counts are done when school is out, or when some portion of the road system is closed, then adjustments for this shall be made. Separate data shall be provided for total, morning, and evening

peak traffic. The existing level of service of the road or intersections shall be calculated. Trips from approved but incomplete developments shall be factored in.

- B. Projections. Projections on traffic growth for five and ten years shall be supplied.
- C. Trip Generation. The trips to be generated from the proposed development shall be identified. This shall be total, morning, and evening peak traffic. For nonresidential developments, additional data on the peak hour of the use shall be required.
- D. Safe Access. The traffic study shall determine whether the development has a safe access location. It shall include improvements needed to ensure safe access including, acceleration lanes, deceleration lanes, right-in/right-out design, turn lanes, or signals. The study should assess whether access roads per Section 13.203D or residential collectors would improve traffic.
- E. Off-Site Conditions. Depending on the size of the project, additional studies beyond the boundaries of the site shall be made under the following conditions.
 - 1. If the property is at an intersection or within 500 feet of such an intersection, then the capacity of the intersection shall be studied. Recommendations for improvements based on the increased traffic from the development shall be made.
 - 2. Where the traffic generated is above 400 peak-hour trips (morning or evening), all intersections within one-quarter mile of the boundaries shall be studied.
 - 3. Where the traffic generated is above 1,000 peak-hour trips (morning or evening), the study shall include any intersections within one mile.
 - 4. All such studies shall identify the current levels of service. The projected level of service of this and other approved but incomplete developments shall be submitted, along with those based on projected traffic increases.
- F. Recommendations for Off-Site Improvements. The study shall identify improvements that could restore the existing level of service.
- G. Action. The planning director and engineer may mandate that off-site improvements be funded by the developer as a condition of approving the development. In doing so, they shall consider the following factors.
 - 1. The cost of improvements per dwelling unit or 1,000 square feet as appropriate to the degree to which the proposed development lowers the level of service at the off-site location.
 - 2. Current plans to expand the impacted road. The developer may be required to donate land in the street's ultimate right-of-way where there is a plan for expansion. The developer may only be required to pay for improving the development's frontage on that road if it connects to a section of road that has already been widened, or where the improvement is to be under contract.
 - 3. Where the area is mostly undeveloped land, the dedication of land for the ultimate right-of-way of that road shall be required.
 - 4. Where the project is infill development, the development shall be permitted even though the level of service will decline, provided all other access issues have been addressed.

Section 13.403 Phased Development

Where there is a programmed road improvement in the jurisdiction, the traffic analysis shall take this into account. The planning director and engineer may require a development to be phased in order to reduce traffic when approved and funded major road construction will further degrade road capacity.

Section 13.404 Traffic Shed Purpose

{Sidebar}

The traffic shed regulations that follow are a growth management regulation intended for use in rural areas, particularly counties or townships that have a substandard rural road system that requires substantial improvement to support future development.

{/Sidebar}

Traffic sheds are a management system that ensures that development is within the capacity of the road network to preserve a level of service of C on all existing local roads. It is applied in areas of mostly undeveloped land having wide road spacing, substandard surfaces, or substandard alignment problems. The jurisdiction does not have a tax base to upgrade roads to meet development demand. The traffic shed provides an analysis of the capacity that can be handled by the existing road, and limits maximum development density to a pro rata share of available capacity. The jurisdiction is divided into traffic sheds (Section 13.405). The capacity of each traffic shed is calculated, as detailed in Section 13.406. The capacities are shown in Table 13.407. Developers have many options for improving the density, as shown in Section 13.408.

Section 13.405 Traffic Shed Map

The traffic shed map (illustrative traffic shed map Figure 13.405) It divides the jurisdiction into traffic sheds. Each traffic shed is served by an existing rural local road which takes traffic from developments to arterial or collector roads. In developing the map, the following standards were applied.

- A. Major Roads. Arterial and collector roads used for traveling to major employment centers are identified.
- B. Traffic Shed Roads. Traffic sheds roads are approximately perpendicular to the major roads (A above) and run between two major roads.
- C. Traffic Shed Delineation. The boundaries are as follows:
 1. A major road arterial or collector is the exit boundary.
 2. The midpoint between two major roads is the interior boundary.
 3. In general, the boundary between traffic sheds is the midpoint between adjoining traffic shed roads. Where there are barriers, such as streams, where a costly structure would be required if the midpoint were used, the barrier shall be used as the boundary.

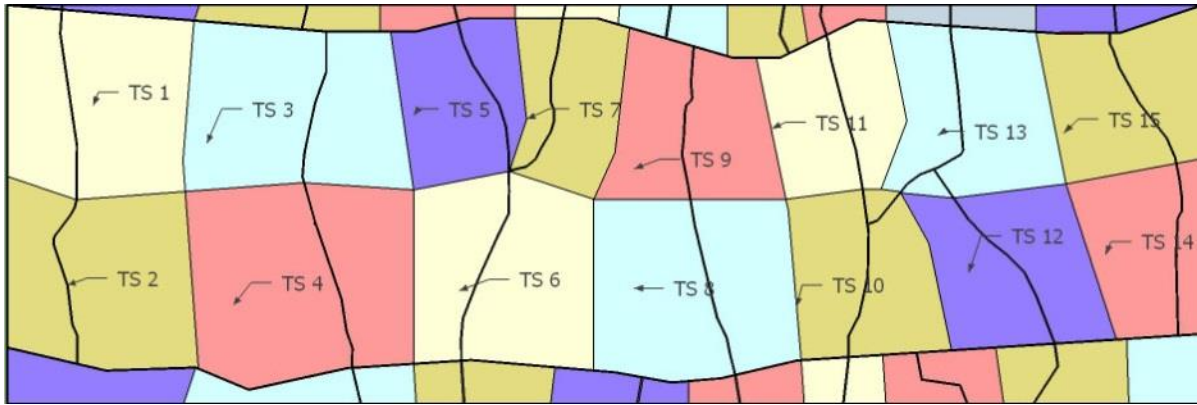


Figure 13.405 Illustrative traffic shed map

Section 13.406 Traffic Shed Capacity

The capacity of the traffic shed model was calculated using the methodology of Transportation Research Board, *Highway Capacity Manual* (HCM 2010), 5th ed. (Washington, DC: National Academy of Sciences, 2010).

- A. Level of Service. Level of service C shall be used to determine capacity. All traffic shed roads shall be treated as residential collectors with no individual access to maintain capacity.
- B. Road Variables. The traffic shed road variables are lane width, distance to obstructions, percentage with no passing, desired level of service, direction of traffic, percentage of truck or bus traffic, and type of pavement.
- C. Topography. There are three types of topography that are provided for in the *Highway Capacity Manual*: level, rolling, and mountainous. The capacities herein are based on a level topography.
- D. Area of Traffic Shed. This is a primary variable as some traffic sheds will vary considerably. Because density is capacity divided by area, this will generally be the key variable in rural areas.
- E. Nonresidential Uses. The traffic shed capacity is based on one peak-hour trip for a dwelling unit. For nonresidential uses, the number of dwelling units shall be divided by maximum peak-hour trips of the use in order to determine the number of thousands of square feet of nonresidential uses permitted.
- F. Existing Traffic. The existing traffic on the road shall be subtracted from the capacity to determine the traffic shed's remaining capacity.

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Section 13.407 Maximum Intensity

Each traffic shed has a maximum travel capacity and a per acre maximum gross density. The maximum gross density is calculated by dividing unused traffic capacity by the area of the traffic shed. In determining traffic shed area, five acres or parcel area, whichever is less, shall be subtracted for each existing dwelling unit. Table 13.407 provides an illustrative maximum permitted capacity in dwelling units per acre for all the traffic sheds in the jurisdiction. The traffic sheds are numbered as shown on the traffic shed map. The

table also provides base data for the shed, its area, lane width, and remaining capacity. When the jurisdiction or other party improves a road or creates a new traffic shed, the jurisdiction shall publish a revised traffic shed table with updated information. Any such updated table shall become official without amending the LDO.

Table 13.407					
Illustrative Traffic Shed Maximum Intensity					
Traffic Shed	Maximum Gross Density per Acre	Shed Data			
		Acres in Shed	Lane Width (ft)	Pavement	Capacity Remaining
TS1	0.596	1,530	12	asphalt	913
TS2	0.374	1,276	9	asphalt	477
TS3	0.008	1,789	12	gravel	17
TS4	0.259	2,198	10	asphalt	568
TS5	0.105	5,420	10	asphalt	568
TS6	0.095	973	10	tar and chip	93
TS7	0.407	1,542	10	asphalt	628
TS8	0.067	4,350	8	asphalt	292

Section 13.408 Maximum Building Capacity of Site

To determine the maximum number of dwelling units permitted on a site, multiply the base site area by the maximum density for the traffic shed shown in Table 13.407. The maximum density is the lower of the site capacity (Division 3.200) and maximum traffic shed intensity (Table 13.407), with the traffic shed almost always being the lower. The following additional standards shall be used in approving a development plan to ensure landowners have a beneficial residential use of their land.

- A. Vacant Parcels. Any vacant parcel not owned in common with other parcels in the traffic shed shall be granted approval for one dwelling unit if the parcel will support an on-site water and sewerage system.
- B. Minimum Density. For any traffic shed having a maximum gross density of less than 0.02, the planning director shall increase the capacity to 0.02.
- C. Adjusted Dwelling Units. Where the traffic shed capacity of the site is less than determined by the site capacity calculation (Division 3.200), the traffic shed density shall control. Section 13.409 provides options for development that may permit eventually reaching the maximum gross density of the district.
- D. Nonresidential Uses. There is no minimum floor area for nonresidential uses, so if the intensity does not meet desired size, the owner will have to develop a dwelling unit.

Section 13.409 Development Options

Since traffic shed densities may be less than those of the zoning district, options are provided that allow landowners to make improvements to raise the capacity or otherwise increase intensity. Nothing prohibits a landowner from building to the maximum permitted intensity (Section 13.408). The following options are provided because the jurisdiction's fiscal capacity to improve a road capacity is limited and cannot be

increased without sizable tax increases. Options must be preapproved, and the planning director shall approve any option meeting the standards below.

- A. Rural Subdivision. A developer may choose to do a rural subdivision (Section 11.208) with the number of dwelling units permitted by Section 13.408. The remainder of the parcel may be held for future development when road capacity is improved by other landowners or the jurisdiction, at which time more development based on the increased capacity of the traffic shed would be permitted. The required open space may be postponed to when future development occurs, based on the initial site capacity calculation.
- B. Cluster. A cluster development can be done at the density permitted by Table 13.407. The cluster shall have lots, roads, and open space, with the open space meeting the percentages from the site capacity calculation (Division 3.200). The remainder of the site can be reserved for future development at such time as the capacity of the road is increased (Figure 13.409B).

C.

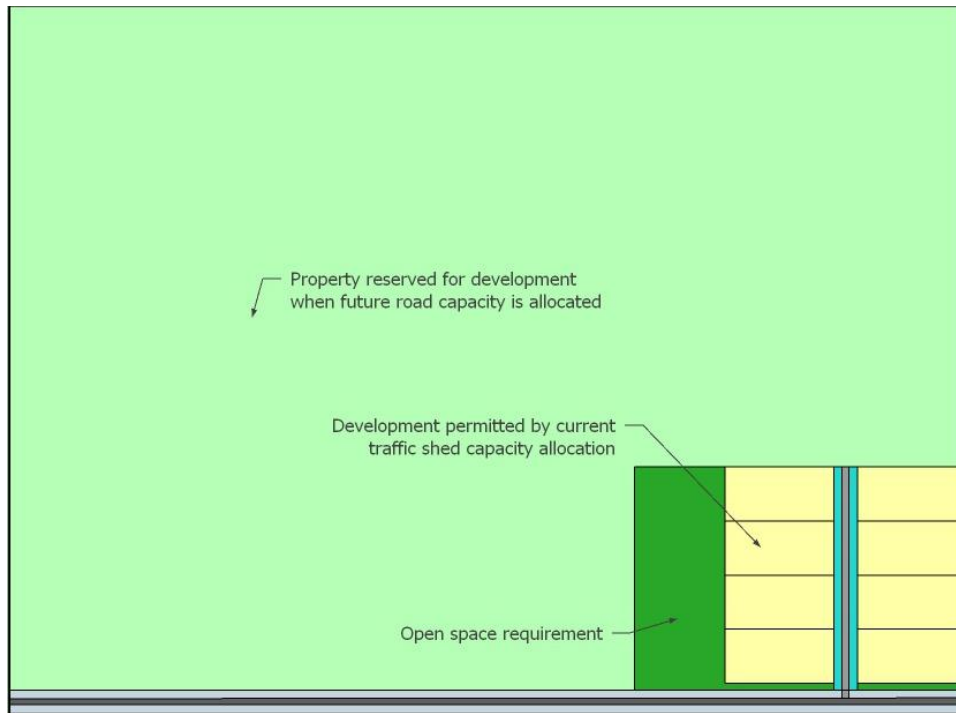


Figure 13.409B Partial development using cluster and reserving land

- D. Road Improvement. Developers may improve the road by widening, changing pavement, or changing alignment (Section 13.410) to increase traffic shed capacity and density. The developer gets the proportional share of the increase.
- E. New Traffic Shed. Developers may build a road that creates a new traffic shed and develop at an increased density. Section 13.411 sets the rules of establishing a new traffic shed.
- F. Transferable Development Rights (TDR). The developer may purchase development rights from another landowner in the traffic shed and build units on the developer's property. The seller may sell all or a portion of the dwelling units permitted by Section 13.408. If all area is sold, additional development would only be possible by an increased traffic shed capacity.

Section 13.410 Road Improvements

The jurisdiction may, from time to time, improve roads, increasing their capacity and changing traffic shed density. Developers may also choose to make improvements to the road, increasing its capacity. The following standards govern density increases that apply to such improvements.

- A. Partial Improvements. Partial improvements made from the site to the arterial or collector roads shall be used to increase the capacity of the road. The improvement shall be made from the furthest point on the site to collector or arterial in order to qualify. This shall also apply to improvements made to a prior improvement.
- B. Density Increase. The increased capacity shall be allocated the pro rata share of the site. Any landowner whose property abuts the improvement shall be able to use their share of the increased capacity immediately.
- C. Noncontiguous Landowners. Landowners who are not adjacent to the improvement for the entire length of their property on the traffic shed road must wait until the road improvement reaches along the property's entire road frontage or extends to the furthest point on their site to develop.
- D. Upgrade of Traffic Shed. When the jurisdiction improves the entire traffic shed road, or a developer makes partial improvements, Table 13.407 shall be amended by staff.

Section 13.411 New Traffic Shed

Developers may create a new traffic shed by building a new road that serves a significant portion of the original traffic shed. When approved by the planning director and engineer, the new boundary shall be mapped, the capacity of the new traffic shed determined, and the original shed's capacity revised. The following rules shall govern the creation of a new traffic shed.

- A. Plan. When a new traffic shed is proposed, the planning director shall review the traffic shed to determine whether other new sheds could be created.
- B. Existing Road Frontage. To be eligible as a new traffic shed, the parcel shall have at least 500 feet of frontage on the collector or arterial serving the existing traffic shed. The planning director may change this where no properties qualify or a qualifying property is unwilling to cooperate.
- C. Area. The area of a proposed new traffic shed shall be a minimum of 15 percent of the original traffic shed area or 250 acres, whichever is greater. The planning director shall indicate adjoining properties to which connections shall be required. In Figure 13.411, the parcel in bright orange is the developer's. The deep orange parcels would be added to the new traffic shed.
- D. Further Connections. The planning director shall identify other parcels that could be added to the new traffic shed (peach). Additional properties shall be added with the intent of maximizing the development potential of the original shed. The following factors shall be met.
 - 1. New traffic shed roads shall connect to other potential properties in the shed and to adjoining sheds.
 - 2. The new traffic shed area shall be less than 50 percent of the original traffic shed.
 - 3. Where there is another potential new traffic shed, the new shed shall not be more than 35 percent of the original.

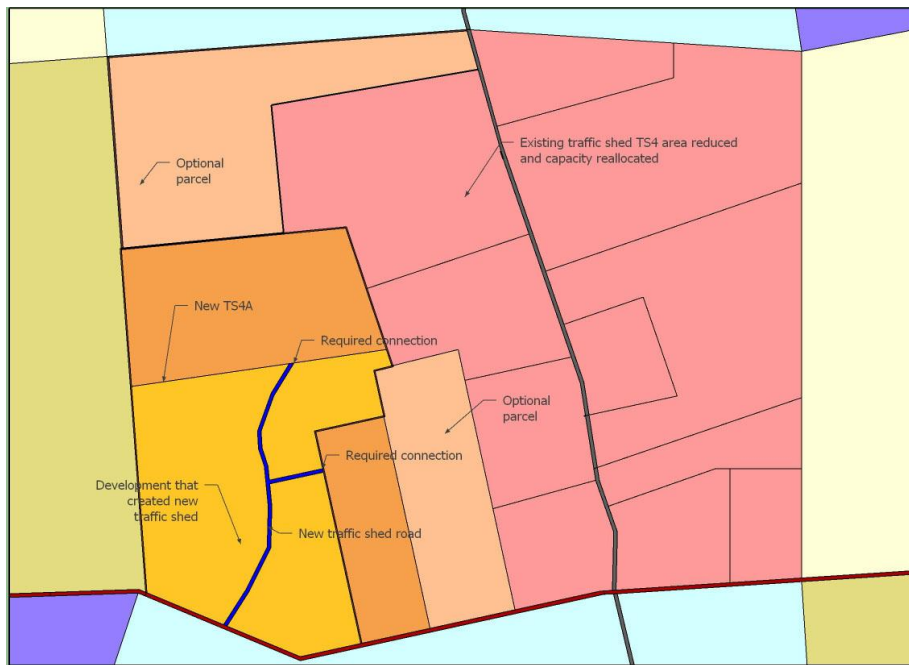


Figure 13.411 Creation of new traffic shed

- E. Approval Objective. The objective of the new traffic shed shall be to bring the capacity of the all land in the original traffic shed to the density permitted in the district.
- F. Shed Capacity. The capacity of the new traffic shed shall be determined by dividing the maximum capacity of the new road at level of service C by the area of the shed or the maximum district capacity, whichever is lower. The existing traffic shed capacity shall be revised by reducing the shed area.
- G. Traffic Shed Plans. Where capacities are well below zoned capacity, the planning director may develop a plan for creating two or more new traffic sheds. Such a plan shall meet the following conditions.
 - 1. The planning director shall propose dividing the existing traffic shed to create at least two sheds.
 - 2. The intersections of traffic shed roads shall be at least 600 feet apart unless the engineer finds that a lesser distance would provide a safer condition.
 - 3. A new traffic shed road shall have several possible alignments that connect all parcels. The road plans shall provide for connectivity to adjoining sheds.
 - 4. A public meeting, subject to notice to all landowner in the existing traffic shed, shall be held to inform owners of the plan and its advantages, and to get input.

Section 13.412 Transferable Development Rights (TDR)

A landowner may seek to purchase development rights from other landowners in the traffic shed. In each traffic shed, the number of development rights for a property shall be determined by multiplying the area of a parcel by the gross density (Table 13.407). A developer may enter into an agreement to purchase development rights from another landowner and apply them to the receiving site. The number of additional dwellings permitted on a site shall never exceed the maximum permitted by Division 3.200.

- A. Existing Dwellings. If there is a home on the sending or receiving site, one development right shall be subtracted from those available, unless it will be torn down as part of the development plan.
- B. The seller of the development rights retains the right to all future development rights obtained from any increases in the capacity.
- C. At the time of sale, a deed shall be recorded indicating the sale of development rights and that no additional units will be permitted until traffic shed capacity is increased. When traffic shed capacity is increased, the landowner will be notified, and the planning director will approve a revised development capacity for recording.
- D. This transfer of development rights stands on its own and is not controlled by the provisions of Article 6, as it is an entirely separate program.

DIVISION 13.500 PARKING AND LOADING

Section 13.501 Purpose

The purpose of this division is to ensure adequate parking and loading for the land uses within the jurisdiction. It is intended to provide needed parking, but not excessive parking. It also controls the design of parking and loading areas. Parking requirements are per dwelling unit for residential uses and by floor area for nonresidential uses. In general, parking is assumed to be on-site. In some situations, the street can be used to meet a portion of the demand for parking. Section 13.504 provides for the planning director to study publicly provided parking or private parking facilities and revise on-site parking based on the supply.

Section 13.502 Street Parking

There are two forms of on-street parking: parallel and angular. Both are limited by restrictions on parking near intersections, fire hydrants, and traffic calming. The angular parking results in more parking on a block face but requires a wider right-of-way. The standard street right-of-way (Division 13.200) is based on parallel parking. Where angled parking is to be used, the right-of-way shall be adequate for the types selected for entire blocks. All on-street parking spaces shall be 20 feet long. Parallel parking spaces are eight feet in width and others are 10 feet in width. The use of street parking as part of the parking requirement shall be governed by Section 13.504.

Section 13.503 Required Parking and Loading

{Sidebar}

There is likely to be a substantial change in parking with the introduction of self-driving cars. The impact is unpredictable and likely to vary between urban, sub-urban, and rural areas. This is an area where monitoring is essential.

{/Sidebar}

All land uses shall have adequate parking, via on-site, in streets, off-site, or shared parking pursuant to the standards of this division. Section 13.504 addresses street parking and off-site parking. Section 13.505 provides for adjustments in parking required when uses sharing parking and need less space than the separate uses. The amount of parking required is set by the type of use. The tables below provide the parking and loading requirements based on the type of use.

Note I broke the following table into parts, to fit pages so you can combine them. I know one has “commercial continued” and that should be eliminated. However, getting to far away from the second line can be a problem. CALL ME IF YOU HAVE QUESTIONS

Table 13.503A Parking and Loading Agriculture, Residential, Home, Institutional		
Use	Parking	Loading
Agriculture		
Clearing	None	None
Nursery	1/250 sf sales space	1/ 2 ac
Commercial Stables	1/3 stalls + 1/3 seats in stands	1/50 stalls
All Other Agriculture	3.0/DU	1 per farm truck
Residential		
Single-Family, Two-Family, and Attached	2.0/DU	None
Multifamily Low-Rise	2.0/DU	None
Other Multifamily	1.2/DU	
Institutional Residential	1.25/unit	None
Residential, Mixed Use	1.5/DU	None
All Other Residential	2.0/DU	None
Home Uses		
Cottage Industry	1/employee + 1/business vehicle	None
Home Day Care	4	None
Live/Work	4	None
All Other Home Uses	Same as DU	None
Institutional		
Assembly	1/3 seats	1/40,000 sf
Clubs and Associations	6/1,000 sf	1/40,000 sf
Fire Stations	4 + 1 per truck bay	None
Institutional Performance	1/3 seats	1/40,000 sf
Museums etc.	2.5/1,000 sf + buses	1/50,000 sf
Police Station	4/1,000 sf	None
Post Office	6/1,000 sf	1+1/postal vehicle
College	0.4/student	1/50,000 sf
Community College	0.6/student	1/50,000 sf
High School	1/classroom + 0.4/student	1/40,000 sf
Elementary and Junior High Schools	2/classroom	1/40,000 sf
Protective Care	2/shift employee	1/20,000 sf
Utilities	2 + 1/on-site employee	1/vehicle

Table 13.503B Parking and Loading Commercial			
Use		Parking	Loading
Commercial			
Bed and Breakfast		1/room	none
Convention Hotels		1.25/room + 2.5/1,000 sf meeting space	1/25,000 sf
Hotels Motels		1.1/room	1/40,000 sf
Boarding and Rooming House		1.25/room	None
Commercial Retail	General	4/1,000 sf	1/25,000 sf
	Liquor		1/10,000 sf
	Food		1/20,000 sf
Drive-in*	Bank	4 stacking spaces	None
	Car Wash	8 stacking spaces	None
	Fast Food	8 stacking or parking study	None
	General	3 stacking spaces	None
Heavy Retail	Building Supplies	2/1,000 sf	1/15,000 sf
	All Other	3/1,000 sf	1/20,000 sf
Hospitals		2/bed	1/50,000 sf
Light Auto	General Sales	4/1,000 sf	1/25,000 sf
	Gas Pumps	2/pump	1
	Car Wash, Self-Wash	3/bay	None
	Car Service	5 + 1/ employee	None
Mixed Use		Prorate by actual uses	
Office	General	3.3/1,000 sf	1/33,000 sf
	Medical	4.00/1,000 sf	1/33,000 sf
	Telemarketin g	4/1,000 sf	None
Services	Barber Shop	4/1,000 sf	None
	Beauty Shop	5/1,000 sf	
	Dry Cleaners	3/1,000 sf	
	Funeral Home	10/1,000 sf	None
	Laundry	0.8/washer-dryer	None
	All Other	3.0/1,000 sf	1/company vehicle

Table 13.503C
Parking and Loading
Commercial and Recreation and Amusement

Use		Parking	Loading
Commercial (continued)			
Shopping Center		4.5/1,000 sf	1/25,000 sf
Vehicle Sales		1/sale vehicle + 10%	2
Vehicle Repair		5/work station	None
Recreation and Amusement			
Adult Use		1/1.25 seats	None
Campground		1/space + 2.5/1,000 sf	None
Camps Day and Youth		1.5/employee + 1/bus	None
Indoor Recreation	Community Center	2/1,000 sf	1
	Swimming Pools	2.5/1,000 sf	None
	Tennis etc.	3/court	None
Outdoor Recreation	Athletic Fields	30/field	1
	Athletic Field, School	1 per 3 stand capacity	2
	Equestrian	1/4 stall + 1/3 seating	1 + 1/60 stalls
	Golf Course	3/hole	None
	Golf Driving or Rifle Range	1.25/ station	None
	Parks	2/ac + specific activities	None
	Skating Rink	1/200 sf rink area +1/3 seats	None
	Swimming Pool	1/100 sf pool area	None
	Tennis etc.	3/court	None
	All Other Active Recreation	1/10,000 sf of area	None
	All Other Passive Recreation	3 + 1/5 ac	None
Indoor Commercial Amusement	Arcade Pool Halls	6/1,000 sf	None
	Arena	1/3 seats	1/20,000 sf
	Bowling Alley	5/lane	1
	Theater	1/2.5 seats	None
	All Other	4.5/1,000 sf	None
Outdoor Commercial Amusement	Amusement Park	Special Study	1/10 ac
	Arena	1/3 seats	1/3 ac
	All Other	1/2.5 seats	1/2 ac

Table 13.503D Parking and Loading Industrial and Temporary Uses			
Use		Parking	Loading
Industrial Use			
Disposal		1.1/employee	1/vehicle
Extraction		1.1/employee	Individual Review
Heavy Industry	Asphalt or Concrete	1.1/employee	3/production station
	General	1.75/1,000 sf	1/8,000 sf
Light Industry		2/1,000 sf	1/5,000 sf
Recycling or Storage		2/1,000 sf + 1/employee	1+1/3 ac
Utilities		Special Review	
Warehousing		5 + 0.5/loading bay	1/10,000 sf
Transportation		2/loading station	5/loading station
Special Uses			
Airport		Special Study	Special Study
Commercial Communication Tower		2	1/transmission unit
Private Landing Field		Special Study	Special Study
Temporary Uses			
Concrete or Asphalt Plant		1.2/on-site employee	4 per loading area
Contractor's Office		3	2
Farm Stand		8	1
Model Home		2	None
Outdoor Sales		None	None
Public Interest Event		1/3 attendees	1
Special Events		1/3 attendees	1

Section 13.504 On-Street and Public Parking

Most local and many collector streets allow parking on the streets. The jurisdiction provides for some public parking and private parking structures. This section provides a means of taking this into account in calculating on-site parking standards. The methodology for calculating the parking reduction factor is presented by zoning district. This section also provides the means to adjust parking demand based on transit ridership.

- A. Urban Mid-Rise (UM) and Urban Core (UC). There shall be no credit for on-street parking, as the intensities are so great that on-street parking is required for short-term needs of business in this district. Surface parking lots do not count, as this is a temporary use that cannot be relied upon. Public parking

structures and private parking structures with more than three stories shall be used in the calculation. However, a survey of public parking structures, transit ridership and other modes of travel shall be developed by the city and used to reduce the on-site parking demand. See Section 13.502 and D below.

- B. Urban (U). The jurisdiction shall determine the total amount of on-street parking available in a nonresidential area that should be considered available for total parking needs. It shall also identify public parking in structures and lots that the jurisdiction intends to retain for parking. A private parking structure two or more stories high shall also be considered available, provided its sole purpose is parking.
- C. Auto-Urban (AU). The jurisdiction shall determine the total amount of on-street parking available in a nonresidential area and any public parking in structures or lots.
- D. Transit Factor. The parking standards in Tables 13.503A–D are based on less than 10 percent of the trips into AU, U, UM, and UC districts being made by transit. The transit reduction factor is calculated by subtracting from 1 the percent that the actual transit modal split exceeds 10 percent.

{Sidebar}

Example: A 15% transit modal split is 0.05 more, so $1.00 - 0.05 = 0.95$. Multiply the current parking requirement by 0.95 to determine the new parking requirement.

{/Sidebar}

- E. Reductions. The reduction for public parking requires the calculation of total eligible public parking. It also requires calculating the percentage of developable floor area in the district. The reduction is based on the share of total parking demand met by public parking.
 - 1. For the U and AU districts, the existing total floor area is calculated and the maximum possible in the district is calculated. The existing floor area is divided by the maximum possible floor area to determine the percentage developed. The existing public parking is allocated proportionally to existing and future uses. The total parking for future uses is determined, and the share of existing parking is subtracted to determine new parking required. New parking is divided by the future floor area (in thousand) square feet to determine the revised spaces per 1,000 square feet.
 - 2. In the UM and UC districts, the maximum floor area will not be achieved by most buildings over the next 30 years, and not all developers seek maximum floor area. The modal split between automobile and various forms of transit is important in determining parking demand since commuters who use transit or taxis do not require parking. The staff shall adjust the parking requirement by determining the portion of the commuters who use transit or do not drive their own cars.

Section 13.505 Shared Parking

In commercial developments with many uses, there is an opportunity to reduce parking requirements because peak parking needs occur at different times of the day. This allows joint use of parking spaces where peak demand occurs at different times of day. The developer of mixed-use buildings and developments may choose to conduct a parking study in order to demonstrate that a reduced number of spaces should be required. The study shall consider the following factors.

- A. Uses. The study shall provide parking information based on the proposed development mix. The study takes into account the uses in the jurisdiction and nearby communities to determine the peak parking

hour, spaces used at the peak, and turnover rates. A graph of 24-hour usage for each use is required. The information shall include the scale of the center or centers for which speak parking use is studied.

- B. Scale. The scale of the center is important, as very large-scale regional centers are more likely to be full on peak parking days and small centers, less full. The smaller centers are more sensitive to changes in use and an anchor store. The study shall consider scale in its recommendations.
- C. Residential. Where residential uses are part of the mix, peak residential parking occurs when most other uses do not need parking, providing a greater ability to share spaces. The study needs to assess the location of the parking. Residential parking should be convenient to the entrances to their units. The study shall indicate how conflicts between uses can be avoided.
- D. Demand. The information in A through C above shall be used to recommend a parking demand and parking layout.

13.506 Garages and Driveways

Garages are counted as parking spaces for residential uses. Where garages take direct access from the street, there shall be a driveway of at least 20 feet from the street for additional parking. Where garages are accessed from alleys, this is not required, as the street space is available.

Section 13.507 Parking Lots

Parking lots have aisles for the movement of vehicles to the parking space and the actual parking space. They can be configured as perpendicular or angled at 60 or 45 degrees. Some small areas may use parallel spaces. The width of the aisle is in part determined by the type of space and whether the aisle accommodates one- or two-way traffic. Aisles may be single- or double-loaded. Figure 13.507 shows the aisle configurations for perpendicular and angled parking. Table 13.507 provides the minimum dimensions for the parking. If landscaped areas are placed between or at the end of the rows, the area per car will increase.

Table 13.507 Parking Lot Design Standards				
Dimension	90-Degree	60-Degree	45-Degree	Parallel
Bay Width (ft)	10	10	10	20
Bay Depth, One Row	18	20.46	20.02	8
Bay Depth, Two Rows	36	20.46	32.15	NA*
Aisle Width, One-Way	22	20	16	NA*
Aisle Width, Two-Way	24	22	20	NA*
Width, Double-Loaded **	130–136	91–95	82–86	NA*
Width, Single-Loaded	42–44	43–45	44–46	NA*
Area per Car	382	471	522	NA*
*Parallel parking is rarely used in parking lots so bay depth or aisle width is not provided.				
**This assumes two aisles with three rows of parking, as shown in 90-degree parking.				

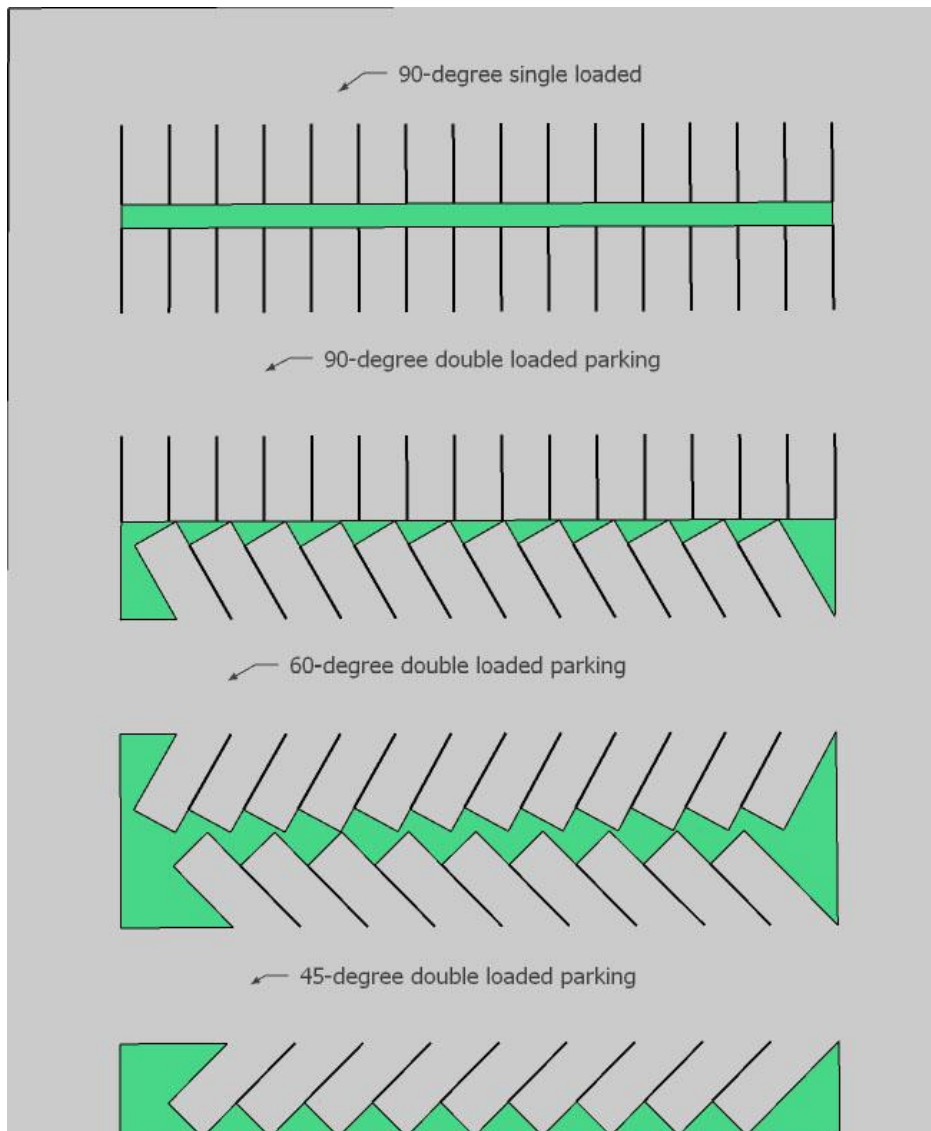


Figure 13.507 Parking configurations

Section 13.508 Parking Lots and Parking Structures

This section addresses requirements for public or private at-grade parking lots and parking structures. All spaces shall meet the requirements of Section 13.507. The following standards apply.

- A. Surface parking lots shall have a parking buffer on all sides facing a street and a 0.1 buffer against any vacant property or existing building with windows facing the lot. Where facing an alley, the lot shall be fenced to prevent access.
- B. Parking structures shall meet the yard and landscaping requirements of the district and the design standards in 11.706B.

Section 13.509 Parking Space Paving

Except as provided in Section 13.510, all parking spaces except those for agricultural uses or temporary uses shall be paved with concrete, asphalt, or brick material. It is recommended that these forms of paving be pervious in order to reduce storm water management loads.

Section 13.510 Grassed and Gravel Parking

The use of grassed parking areas and gravel parking is permitted in some situations, as per this section.

- A. Grass Parking. This shall only be allowed in event parking areas where the parking is to be permitted no more than five days per year for special events. It shall be permitted only upon determination of the engineer that the soils are unlikely to become impassible in the time of the year the events are to be held. All such areas shall be maintained in a mowed condition, with grass kept to less than four inches in height. Grass parking shall not be used where grass requires irrigation to stay green through the growing season. It shall not be used where snow is likely when parking is needed.
- B. Reinforced Grass Parking. This is permitted for residential driveways, and areas where the spaces are to be occupied less than 15 days per year. It consists of concrete or plastic materials that form a grid with soil in the voids for grass. Any plastics shall be certified by the engineer as suitable for long-term use and resistant to sunlight's deteriorating effects. No irrigation shall be permitted.
- C. Reinforced Gravel Parking. This is permitted for residential driveways and parking areas with less than 20 parking spaces, to be occupied less than 30 days per year. It consists of concrete or plastic materials that form a grid with pea gravel in the voids. Any plastics shall be certified by the engineer as suitable for long-term use and resistant to sunlight's deteriorating effects.
- D. Gravel Parking. This can be used in any residential area where the driveways are at least 30 feet in length. It may also be used in the parking lots of uses that involve mining or concrete batch plants, provided there is a minimum eight-inch base under the surface gravel. The jurisdiction may require the area be treated to inhibit dust from becoming airborne.

Section 13.511 Spaces for Shared Cars

In U and AU districts where the jurisdiction has licensed car-sharing operations, blocks with more than five dwelling units per acre (net) shall provide 15 percent of all on-street parking spaces for shared cars. These spaces shall have signs indicating the space is reserved for shared cars, and the space shall be painted blue to highlight its intended use. In UC or UM districts, the engineer shall develop a standard for spaces for shared cars in discussion with parking structure operators.

Section 13.512 Loading Spaces

Where loading spaces are required by Tables 13.503A–D, they shall be provided for each use meeting the requirements. In multi-tenant buildings where individual uses do not meet the floor area required to qualify for parking, the building's total square footage shall be used to determine the needed loading spaces. Where a building floor area is less than 40 percent of the square footage requirement for truck parking, the use may provide a space for loading in the parking lot or area reserved for a fire lane.

Section 13.513 Location of Loading

In general, the loading area should be to the rear of the building, with bufferyards separating it from any residential use. It may also be located to the side, where it can be screened from view from the street and can be shared by the adjoining use. In industrial areas, loading areas may be to the side or rear. All loading areas shall have access roads that have corner radii that trailer trucks can negotiate. Garbage areas for nonresidential uses shall be located adjoining the loading areas.

Section 13.514 Loading Area Standards

The length and width of the loading area depends on the type of vehicle that will be handled. Table 13.514 provides the standards. The special category is for very wide or long load vehicles. The developer shall provide data on truck types and products, and the engineer shall determine the loading area requirements. Special also refers to loadings that will be done from the side as opposed to a loading dock where goods are loaded from the rear.

Table 13.514 Loading Space Requirements			
Vehicle Type	Width (ft)	Length (ft)	Approach (ft)
Parcel Delivery and Two-Axle Trucks	12	24	20
Trailer Trucks, Maximum Length 45 ft	14	55	40
Trailer Trucks, Maximum Length 60 ft	14	75	60
Special Trailer Truck	To be determined by load sizes and truck sizes		

ARTICLE 14 INFRASTRUCTURE

Contents:

DIVISION 14.100 PURPOSE

Section 14.101 Purpose

DIVISION 14.200 WATER

Section 14.201 Public / Private

Section 14.202 Public Water Supply

Section 14.203 On-Site Water Supply

Section 14.204 Fire Protection

Section 14.205 Drought Area

Section 14.206 Inadequate Capacity

DIVISION 14.300 SEWERAGE

Section 14.301 Purpose

Section 14.302 Public Sewer

Section 14.303 Inadequate Sewers

Section 14.304 Pretreatment

Section 14.305 Community Sewer Systems

Section 14.306 On-Site Disposal

Section 14.307 Septic Tank and Tile Field

Section 14.308 Mound Systems

Section 14.309 Aerated Tank Systems

Section 14.310 Setbacks

Section 14.311 Maintenance

Section 14.312 Holding Tanks

Section 14.313 Grey Water

DIVISION 14.400 STORM WATER MANAGEMENT

Section 14.401 Purpose

Section 14.402 Storm Water Management Plan

Section 14.403 Calculating Storm Water Volumes

Section 14.404 Storm Water Conveyance System

Section 14.405 Land Cover

Section 14.406 Water Quality

DIVISION 14.500 BEST MANAGEMENT PRACTICES

Section 14.501 Purpose

Section 14.502 Green Roofs

Section 14.503 Roof Storage

Section 14.504 Drip-Line Storage

Section 14.505 Rain Barrels

Section 14.506 Rain Garden

Section 14.507 Bioswales

Section 14.508 Hardscape Detention Features

Section 14.509 Water Features

Section 14.510 Pervious Pavement

Section 14.511 Swales

Section 14.512 Drainageway Soils

Section 14.513 Enhanced Surface Drainage

Section 14.514 De-Channelization

Section 14.515 Road Location

Section 14.516 Grass Filtration

Section 14.517 Grass Filtration with Curbs

Section 14.518 Detention Basins

Section 14.519 Detention with Irrigation

Section 14.520 Retention Basins

Section 14.521 Constructed Wetlands

Section 14.522 Agricultural Wetlands

Section 14.523 Parallel Detention/Retention

Section 14.524 Detention Channels

Section 14.525 Aeration

Section 14.526 Waterfront Detention

Section 14.527 Underground Detention

Section 14.528 Sidewalk Detention

Section 14.529 Level Spreaders

Section 14.530 Lawn Preparation

Section 14.531 Inlet Treatment

Section 14.532 Street Sweeping

Section 14.533 Remedial Surface Drainage

DIVISION 14.600 OTHER INFRASTRUCTURE

Section 14.601 Purpose

Section 14.602 Placement

Section 14.603 Easements

Section 14.604 Undergrounding

Section 14.605 Shared Placement

Section 14.606 Maintenance

DIVISION 14.100 PURPOSE

Section 14.101 Purpose

This article provides the requirements for the provision of infrastructure for water (DIVISION 14.200), sewerage (DIVISION 14.300), storm water management (DIVISION 14.400), best management practices (14.500) and to privately provided infrastructure for electric, gas, telephone, and cable (DIVISION 14.600).

- A. Water. It is required that all uses and persons be provided with a water supply for domestic water that is adequate and safe to drink. This may be provided via private wells, public water facilities, or

community systems meeting public water supply standards. It also may include the provision of water for firefighting purposes.

- B. Sewerage. All uses are to be provided with adequate treatment of sewerage to protect health, safety, and welfare. This is done by connecting to public or community sewer systems where available. On-site systems are permitted where public systems are not available. Grey water, where permitted by the jurisdiction, shall also be regulated.
- C. Storm Water Management. The management of storm water is intended to protect persons, buildings, and property from flooding. It achieves this in part through the design of storm water facilities and by keeping development out of areas that flood ([ARTICLE 3](#)). It is also intended to provide for groundwater recharge, stabilize stream regimes, and improve water quality by lowering the amount of pollutants reaching surface water, protecting health and general welfare. It encourages the preservation of natural drainage systems as the most efficient and least expensive method of conveying storm water.
- D. Best Management Practices. Best management practices identify storm water management techniques or approaches that can be used in combination to achieve the goals stated in C above. This includes practices that are integrated into the design of buildings or on-lot facilities, as well as ways to control the volume and quality of runoff. To achieve this goal, there are two very important management techniques that are built into this ordinance in other sections: clustering and resource protection standards. In combination, these allow for the preservation of areas that naturally slow runoff, increase recharge, and improve the quality of storm water.
- E. Other Systems. This division addresses other utilities and their locations.

DIVISION 14.200 WATER

Section 14.201 Public / Private

The jurisdiction shall provide public water supply within its water service areas through its public works department or other agencies. Where community systems are permitted and approved, they are considered public water system and shall meet the same standards.

Section 14.202 Public Water Supply

All subdivisions or land developments with 500 feet of public water supply lines shall connect to those lines in the S, AU, U, UM, UC, BP, I, or HI districts. All such facilities shall meet federal, state, and county water quality standards for public water supply. The minimum standards below shall be met.

- A. Maximum Daily Flow. 1.5 average daily flow.
- B. Maximum Daily Pressure. 40 psi.
- C. Hourly Flow. 2.1 times average daily flow.
- D. Hourly Pressure. 30 psi.
- E. Fire Flow. 1,000 gallons per minute and 20 psi.
- F. Flushing. Four feet per second.

Section 14.203 On-Site Water Supply

In rural districts (N, AG, CS) and estate (E) districts, unless public water is available (typically from rural water districts), no habitable structure or lot shall be permitted without having a well tested and approved by the county health department. Such wells shall have a yield of five gallons per minute or, if less, have a water tank of 500 gallons that can be refilled within eight hours.

Section 14.204 Fire Protection

Unless specifically exempted in this section, all subdivisions and land developments shall be connected to a water supply line with hydrants spaced no more than 400 feet apart. Such lines shall meet the minimum standards of [Section 14.202](#). The following are exceptions.

- A. Exemptions. Rural water supply districts are exempted. In addition, public water systems owned by specific developments may also be exempted if they do not have a water tower.
- B. Alternative Fire Water Supply. The exempted developments shall have installed drafting stations at least every 1,320 feet that can be used by tanker trucks to refill. The drafting stations shall be installed in at least four feet of water. Greater depth is required where necessary to keep the intake below winter ice.
- C. Sprinkler Systems. All units relying on rural water systems, or private systems with inadequate water pressure and flow rate, shall install a sprinkler system per fire department requirements. Sprinkler systems shall be approved by the fire department at building permit time.

Section 14.205 Drought Area

In arid areas and drought areas, water conservation is required. The developer shall submit a conservation plan. The following are elements to be considered. (Items A, B, and C are mandatory.)

- A. Low-Flush Toilets. These shall be 1.3 gallons per flush or less.
- B. Urine Separation. All commercial buildings shall install waterless urinals. By 2020, all existing buildings shall replace existing urinals with units that do not flush using water.
- C. Irrigation. All irrigation shall be drip irrigation.
- D. Rainwater Capture. The use of water barrels or storage tanks shall be required for all buildings not using a native landscape that requires no irrigation. These devices shall supply all irrigation. An engineer shall approve the size of the irrigation system based on the size of capture and storage.
- E. Grey Water Systems. Grey water systems may be used for irrigation.
- F. Lawns. Lawns covered in grasses are prohibited where they require periodic watering. Grasses or other native ground cover able to survive extended periods without rain and then recover are permitted, provided the jurisdiction's urban forester approves the species as acceptable.
- G. Golf Courses. These uses shall submit plans that reduce the demand for domestic water, including the use of grey water and roof drainage. The design of greens and tees that minimize daily irrigation needs shall be provided. Fairway grasses that are drought-resistant shall be used to minimize the need for irrigation. Roughs and hazards shall use native vegetation or materials that require no irrigation. A plan for additional water conservation during water emergencies shall also be provided.

Section 14.206 Inadequate Capacity

If the size of existing mains is inadequate, the developer may be required to make off-site improvements in order to provide proper flows or to contribute to the cost of such facilities. Likewise, if well or tank storage is inadequate, the developer may be required to make the improvements or contribute to the costs. In lieu of this, a first phase of development that can be adequately served may be approved, with additional phases held until the capacity is available.

DIVISION 14.300 SEWERAGE

Section 14.301 Purpose

This division provides rules for installing public sewer facilities in developments where the jurisdiction or other public agency provides public sewers. It also provides standards for private sewer systems for one or more developments and for on-site sewerage disposal.

Section 14.302 Public Sewer

All subdivisions or land developments with 500 feet of public sewer lines shall connect to those lines in the S, AU, U, UM, UC, BP, I or HI districts. Privately owned treatment facilities may be approved where public sewers are not available or cannot be provided.

Section 14.303 Inadequate Sewers

If the jurisdiction's engineer determines that the sewer lines and/or sewer plant to which the development proposes to connect have inadequate capacity, the jurisdiction shall require one of the following remedies.

- A. Inadequate Line Capacity. The jurisdiction may require the developer to make or contribute to the cost of off-site improvements. Where the improvements will support a larger growth area, payment shall be proportional. If improvements have been funded but are currently inadequate, the jurisdiction may approve a first phase for which there is capacity.
- B. Lack of Plant Capacity. If the plant has inadequate capacity, the project shall be denied, or the jurisdiction may approve a first phase for which there is capacity.
- C. Jurisdictional Responsibility. Within the sewer service area, the jurisdiction may undertake timely expansions and may create special taxing districts to assist in funding such expansion.

Section 14.304 Pretreatment

All industrial uses shall submit documentation on the materials to be discharged in its waste water and the quantities that will be generated. The public works department shall determine if the use will be required to provide pretreatment prior to discharge. The pretreatment shall be required to remove or neutralize chemicals that would upset the operation of the treatment plant.

Section 14.305 Community Sewer Systems

These are a subset of public sewer systems that are designed to serve a single development. These are appropriate in the E, CS, AG, and N districts, where no public sewer system will be provided but permitted densities require a sewer system that meets state standards for public systems. These fall into two categories: package plants and land treatment plants. The following rules apply.

- A. Land Treatment. There are a variety of land treatment systems, including spray irrigation, subsurface irrigation, and constructed wetlands. All are superior to package plants. They all have excess capacity that allows them to be shut down for extended periods without discharging untreated wastes. The following standards apply to land treatment.
 - 1. Seasonal constraints. Winter is a critical period due to the end of growing season. Systems must be designed with a storage capacity for 120 percent of the average number of days outside the growing season.
 - 2. Rainfall. Systems that are dependent on plants to take up nutrients are not efficient during rain events, allowing nutrients to wash away. Controls and monitoring equipment that limit waste application to periods suitable for irrigation shall be installed.
 - 3. Waste storage lagoons. These shall be located at least 200 feet from the nearest dwelling unit or 150 feet from nonresidential uses. The facilities shall be fenced to prevent access.
 - 4. Aeration shall be provided to prevent the lagoons from becoming anaerobic. Emergency generators or wind or solar systems with batteries are required to ensure function in the event of a power
 - 5. Irrigation system. If the system involves spray irrigation of the effluent, then it shall be located a minimum of 100 feet from any road and 200 feet from any dwelling unit. Controls shall be provided to shut the irrigation down when wind speed exceeds 15 mph.
- B. Package Plants. These are generally undesirable because they are prone to failures due to irregular loading or lack of 24-7 maintenance staff. These shall be permitted if both of the following conditions are met.

1. The jurisdiction accepts the responsibility for operation and maintenance.
2. A special taxing district has been formed to fund the operational costs of servicing the small plant.

Section 14.306 On-Site Disposal

All on-site sewerage disposal systems shall be approved by the county health department. The size of these systems is related to the number of bedrooms for residential units and equivalent dwelling units for nonresidential uses. Table 14.306 indicates the gallons required for homes of different sizes.

Table 14.306 Design Flows for On-Site Systems		
House Size - Bedrooms	Gallons per Day	
	Low-Flow Toilets and Showers	Other
1	120	150
2	240	300
3	360	450
4	480	600
5	600	750
For more than five bedrooms, add 120 or 150 for each additional bedroom.		

Section 14.307 Septic Tank and Tile Field

This system has a septic tank that settles solids and uses anaerobic action to degrade the waste, and a tile field that disposes of the effluent. The minimum lot area for this type of system is one acre, and the lot must have the tile field and a secondary replacement tile field approved. All such systems shall have a minimum separation of three feet from the bottom of the field pipes to impervious soil layers, seasonal high-water table, or bedrock. In karst areas, mound systems will be required.

Section 14.308 Mound Systems

This is a system designed to operate in areas where the vertical separation required by [Section 14.307](#) is not present and in areas of karst. A mound system requires suitable soils to be imported in order to provide three feet of separation from the bottom of the tiles to restrictive soil conditions. Such systems generally require pumps to take the effluent from the septic tank to the tile field, unless the home is sufficiently higher than the tank and tile field to allow gravity flow. The following standards shall be met.

- A. Design. The mound soils shall extend at least 10 feet beyond the tile field, as required in B or C below.
- B. Soils. The soil for the mound shall have a sufficient mix of loam, clay, and sand so that it takes a minimum of 36 hours to spread across the mound and percolate through the fill area.
- C. Slope. A slope of one in three shall be maintained for mounds without structural containment, as in D below.
- D. Containment. The area of the mound can be reduced by a concrete wall or stacked rock to eliminate the sloped sides. The containment shall be at least eight feet from the tile field. A concrete wall shall be screened with shrubs planted five feet on center. For a decorative stacked stone wall, only ground covers are required.
- E. Karst. In karst environments, additional problems are created by the rapid transmission of water to the aquifer and the sinkhole potential. The mound shall provide five feet of separation from the existing soil surface. The area per dwelling unit shall be based on a total disposal load of 240 gallons per acre of lot size. The tile field shall be a dosing system with three disposal fields at least 75 feet apart that are used alternately to spread the waste water. Where the site is in areas at high risk of subsidence or with many existing sinkholes, the disposal load shall be decreased to 90 gallons per acre and four dosing fields, as required by the engineer.

Section 14.309 Aerated Tank Systems

This replaces the septic tank for settling solids and providing pretreatment and requires power. Aerated tanks are permitted to replace the anaerobic septic tank in order to provide aerobic treatment. The electrical system shall have backup battery or generator power for a period of 48 hours.

Section 14.310 Setbacks

Setbacks are required to ensure that the facilities are properly separated in order to protect public health, safety, and welfare. Table 14.310 provides setbacks for the tanks and disposal fields.

Table 14.310 System Setbacks in Feet		
Objects	Tanks	Disposal Fields
Wells	50	75
Waterbodies	100	100
Property Lines	10	10
Other Systems	As required for components	
Other Systems in Karst	100	300

Section 14.311 Maintenance

All system tanks shall be pumped and inspected once every two years. Mound systems with a pump shall be pumped and inspected yearly. A warning light system shall be provided that indicates when the system is backing up or malfunctioning. Prior to the sale of the property, a system inspection shall be conducted and sent to the county health department to determine if the tanks and disposal fields are functioning properly. If problems are found, they shall be corrected or the system replaced at the seller's expense prior to a sale.

Section 14.312 Holding Tanks

Holding tanks are prohibited where soils and lot size permit a new on-site system. The following are areas where they may be used.

- A. Existing Dwellings. A holding tank is a desired solution for existing units with failed systems where there is inadequate land on the lot for a new system to function.
- B. Existing Lot. Where a viable system cannot be provided due to size or unsuited soils, or where it would require clearing protected woodlands, a holding tank may be used.
- C. Common Lots. Where lots in A or B are held in common with adjoining lots, they shall be combined to create lots large enough to accommodate a functioning on-site system.
- D. Seasonal Dwelling. Where the development is intended for seasonal use, so the units are generally unoccupied, a holding tank is suitable, provided there is an agreement with a sewer plant to accept and treat the wastes.
- E. Areas of Unsuitable Soils. A development in an area with soils unsuitable for a functioning on-site system may be served by a large-scale holding tank. The property owners' association shall be responsible for payment, and meters for water supply are strongly recommended. The development shall have an agreement with a contractor for hauling the waste on a schedule.
- F. Disposal. There must be a sewer plant within 15 miles of the development that is designed to accept sewerage and has contracted to serve the area.
- G. Inspection. The holding tanks shall be of concrete construction and inspected every four years to ensure tank integrity.

Section 14.313 Grey Water

There are two types of grey water systems, public and private. In public systems waste water is treated at the sewer plant for use as irrigation water. The jurisdiction shall provide a system to distribute grey water for street tree, park, or other irrigation purposes. This distribution system shall not intersect with public water systems. The jurisdiction may permit homes or other used to install a separate grey water system separating, bath, shower, and sinks from the sewer system. This system should connect to a cistern or other storage for use for on-site irrigations. Such systems shall meet building ordinance standards for grey water.

DIVISION 14.400 STORM WATER MANAGEMENT

Section 14.401 Purpose

This division requires the management of storm water for every development or building site. Where feasible, storm water shall be kept on-site and not released. Otherwise, storm water must be stored and released in a manner that prevents flooding and cleans the water. This division covers the design of such systems.

Section 14.402 Storm Water Management Plan

All subdivisions and land development applications shall contain a storm water management plan. The plan shall provide the following information.

- A. Existing Runoff. The runoff from the site in its current condition shall be calculated. This indicates the total storm water release from the site during a .02 and .005 APS storm and the rate of runoff and current peak flow in cubic feet per second (cfs). The quantity of existing storage in wetlands and depressional areas on-site shall be identified and .02 and .005 APS floodplain areas shall be mapped to one-foot contours.
- B. Downstream Conditions. The study shall report on downstream conditions including channel problems, existing homes or obstructions, and frequency of flooding. The jurisdiction's engineer should have this information. Where there are existing problems with downstream flooding, the engineer may require increased storage and lower release rates to prevent the worsening of flooding. Any jurisdictional actions that should be undertaken to lessen the conditions shall be identified.
- C. Watershed Context. The report shall describe the general soils of the site and watershed, indicating whether soils favor retention facilities rather than detention. It shall also assess the slopes of the site, prior stream modification, and channel slopes in order to determine whether techniques such as de-channelization would benefit the site and improve watershed storm water management.
- D. Future Runoff. Runoff created by the proposed developments shall not increase the rates of the existing site, as provided in B above. The runoff from the proposed development shall be calculated, including that created by the loss of natural vegetation and loss of existing on-site storage. It shall also project any change in floodplain elevations on- or off-site. This shall be calculated for .02 and .005 APS storms.
- E. Plan. The plan shall review soils and subsurface conditions in order to determine whether retention or detention facilities can be provided. Where retention is feasible, it is desired, except in karst areas, where preventing the creation of sinkholes is required via pumping and irrigation. The plan shall provide engineering drawings and calculations on all detention, retention, management practices, and drainage areas for a .02 and .005 APS storm to demonstrate that the system will not increase the peak runoff flows. It shall include a drawing indicating the inundation of the site during a .02 and .005 APS storm and on land within 200 feet of the site. The plan shall also provide details on the techniques used to improve the quality of the runoff released from the site.

Section 14.403 Calculating Storm Water Volumes

The storm water runoff rates shall be determined by appropriate computer models or, in some cases, the rational method.

- A. Storm Type. All calculations shall be based on a 24-hour duration Natural Resources Conservation Service (NRCS) Type 2 storm.
- B. Computer Models. Computer models shall generate hydrographs based on NRCS TR-55 time of concentration and curve number methodologies. The following models are examples. (Local jurisdictions may not have access to all models.) They are HEC-1 (COE), HEC-HMS (COE), TR-20 (NRCS), TR-55 (NRCS), or XPSWMM.
- C. Rational Method. For small sites of five acres or less that have a contributing drainage area of 50 acres or less and no depressional storage, the rational method may be used instead of any of the computer models shown in B above.
- D. Storms. Where FEMA or NOAA has updated rainfall studies to account for more intense storms due to global warming, those storms shall be used in the calculations. Where the storm data has not been updated, .02 and .005 APS storms shall be used in the calculations.
- E. Certification. All calculations shall be submitted and signed by a registered civil engineer and the model results presented. The details of engineering calculations on the sizing of facilities and drainage tables shall be included in the study.

Section 14.404 Storm Water Conveyance System

It is important to understand how storm water is conveyed on a site in order to ensure safe travel and provide dry building sites on the development. A storm water conveyance system includes the design of surface storm water channels, storm water sewers, roads, and areas to be inundated during storms of greater than the conveyance system design standard.

- A. Standard. The water movement system surface channels and storm sewers shall be designed for at least a .02 APS storm. The flood elevation during more intense events shall be shown.
- B. Buildings. All buildings shall be at least one foot above the .005 APS storm flood level and five feet away from that elevation line.
- C. Culverts. Metal or concrete culverts for driveways shall be designed for .02 APS storms.
- D. Bridges. Bridges on arterials and collector shall be designed to accommodate a .002 APS storm, and the lowest element of the structure shall be three feet above that design elevation. Local street bridges shall accommodate a .005 APS flow.
- E. Overflow Conveyance. The areas that will be inundated during a .005 APS storm when the storm water conveyance system overflows shall be shown. The purpose shall be to design a planned inundation system that does not endanger access or damage to properties. The depth of water and rate of flow shall be indicated for the .005 APS storm event.
- F. Streets. No expressway, arterial, or collector street shall be inundated or used for storage when the water conveyance system's capacity is over-topped. Local streets may be used for storage with a maximum storage depth of no more than six inches during a .005 APS storm.

Section 14.405 Land Cover

In determining flows, both existing and future land covers, including buildings and roads, must be taken into account in order to determine the ability of the land to hold storm water. The USDA NRCS has curve numbers for the built, agricultural, and natural covers for four soil types that shall be used to determine existing and future runoff. The preservation of natural covers is an important strategy to slow or reduce runoff in cluster development.

Section 14.406 Water Quality

Storm water management structures or practices are required to reduce the total suspended solids in runoff water by at least 80 percent. A storm water conveyance system that uses vegetative covers or filter strips is strongly recommended in order to reduce suspended solids and other pollutants from reaching surface waters below storm water facilities.

Section 14.501 Purpose

This division is a listing of best practices for the management of storm water. Management practices should be used in combination to develop the most effective management system. The most desirable system would have a storm water retention basin as the primary element. Since many areas are not suited for this system, the detention basin should be combined with other techniques to slow runoff and increase recharge of groundwater.

Section 14.502 Green Roofs

There are three types of green roofs with different characteristics. A major distinction between the types is the structure needed to support them and the degree to which they retard runoff. Depending on type, they all provide some evapotranspiration, reducing ultimate runoff.

- A. **Lightweight.** Lightweight systems require only a moderate increase in the structure needed to support them. These are generally panel systems where the green roof comes preplanted in modular components that are installed like tiles. The soil is a lightweight mix designed to provide a growth medium and drain fairly quickly. Typically, green roof units add only 20 to 30 pounds per square foot to the roof design load. Plant materials are generally sedums and other drought-resistant plant materials that require watering only in severe drought situations.
- B. **Heavy Roofs.** These roofs are designed to support grasses, forbs, or, in some cases, trees and shrubs with a minimum of four inches of soil. The roof loadings are very substantial and must be designed to support the soil and snow loads. The engineer or architect shall provide specifications to ensure the structure will support the loads. The plant material and depth of soil should be selected to be relatively drought-tolerant in order to avoid having to irrigate the roof.
- C. **Storage Capacity.** Green roofs, light or heavy, can be designed to store some water for slow release. This requires additional work in selecting the plants, as they must survive in saturated soils or submerged for the drawdown periods. Storage of storm water adds additional weight that the roof structure must support ([Section 14.503](#)).

Section 14.503 Roof Storage

Flat roofs can be designed to store water to depths measured in inches and release that water slowly to the storm sewer or drainage system through controlled downspout release (Figure 14.503). This design requires waterproofing of the roof and parapet walls. The downspout release shall be restricted to allow slow release, with an overflow release for heavier storm events. This form of retention requires a roof structure designed for roof design load, snow loads, and the total load of storage.

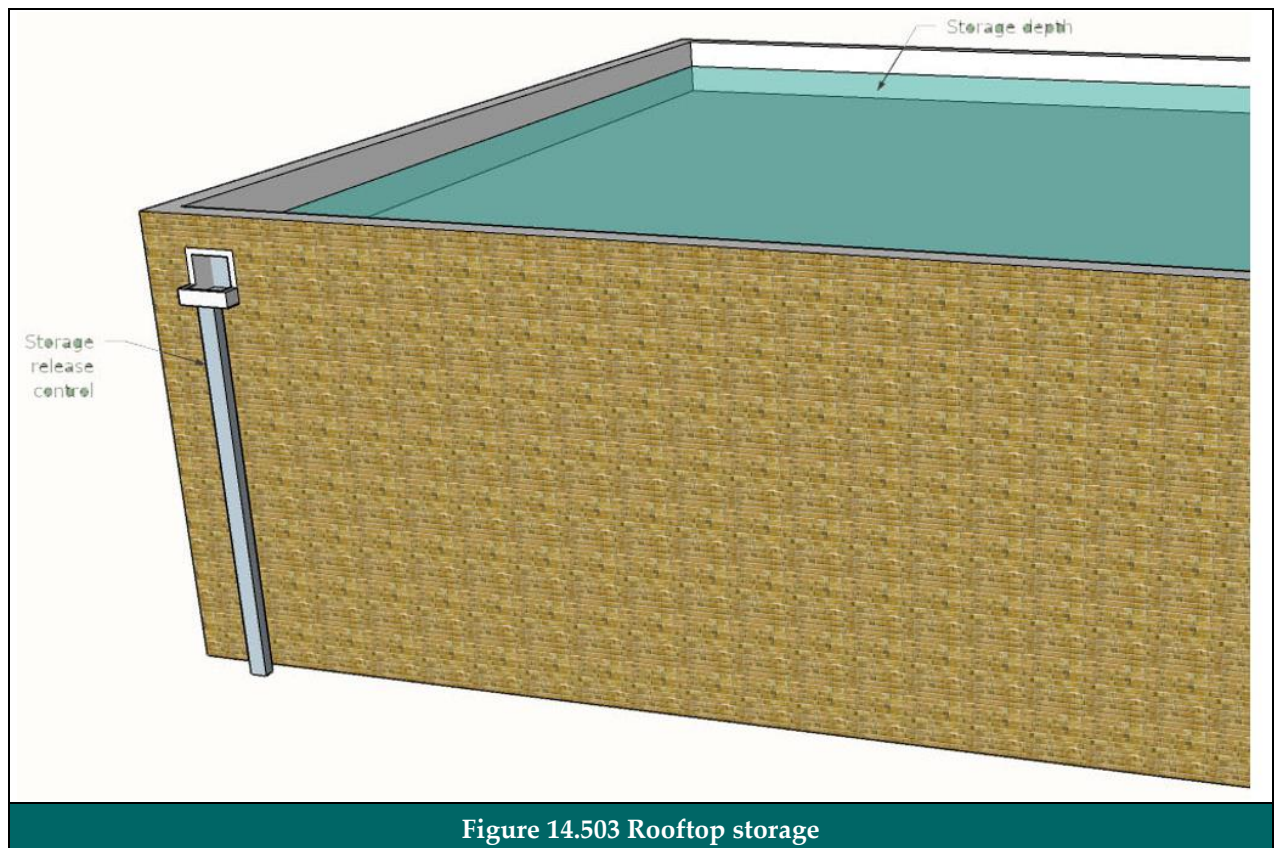


Figure 14.503 Rooftop storage

Section 14.504 Drip-Line Storage

This form of storage is designed to handle water coming off pitched roofs, where the water meets the ground. An area of gravel is used at the surface of the ground, overlaying a trench designed to store water and slowly allow it to recharge groundwater or be released over time. It requires the roofs have overhangs of two or more feet so that backsplash does not stain the building walls. Figure 14.504 illustrates this design. The system can discharge to storm sewers, surface channels, or overland flows. It is most applicable to residential and small nonresidential structures.

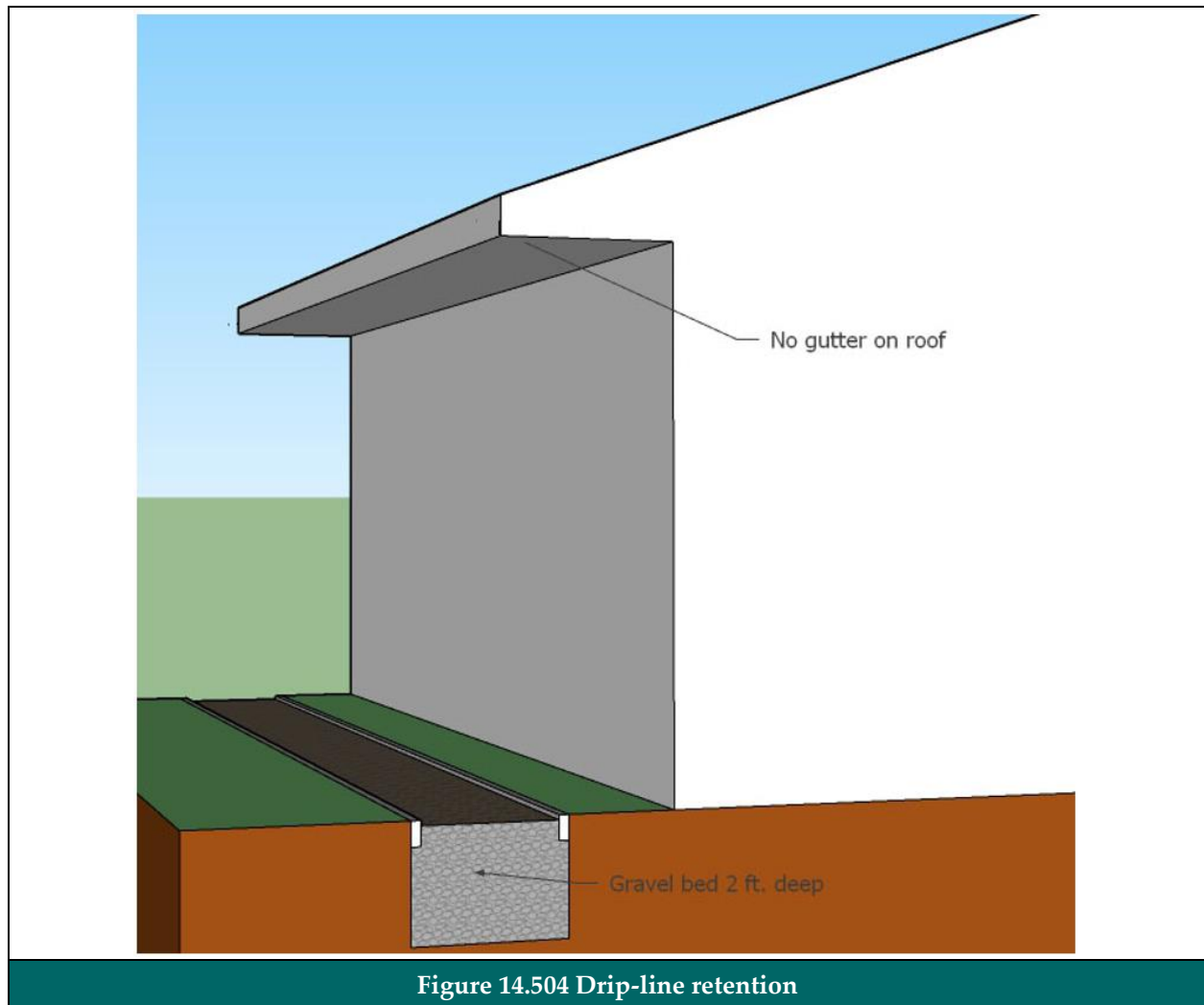


Figure 14.504 Drip-line retention

Section 14.505 Rain Barrels

This is a storage system that is attached to downspouts from gutters that store water, often to be used for irrigation. It is designed as a holding tank that releases the stored water at a slow rate. In arid areas, it can be designed to store water in a cistern for irrigation and does little to reduce runoff. Residential barrels typically have storage capacities of 55 to 300 gallons. They can be designed to provide specific storage and irrigation capacities. In commercial areas, very large tanks can be used to provide irrigation for landscaped areas. Figure 14.505 illustrates a typical rain barrel system. A cistern is a subsurface tank, typically of a larger size and equipped with pumps to irrigate.

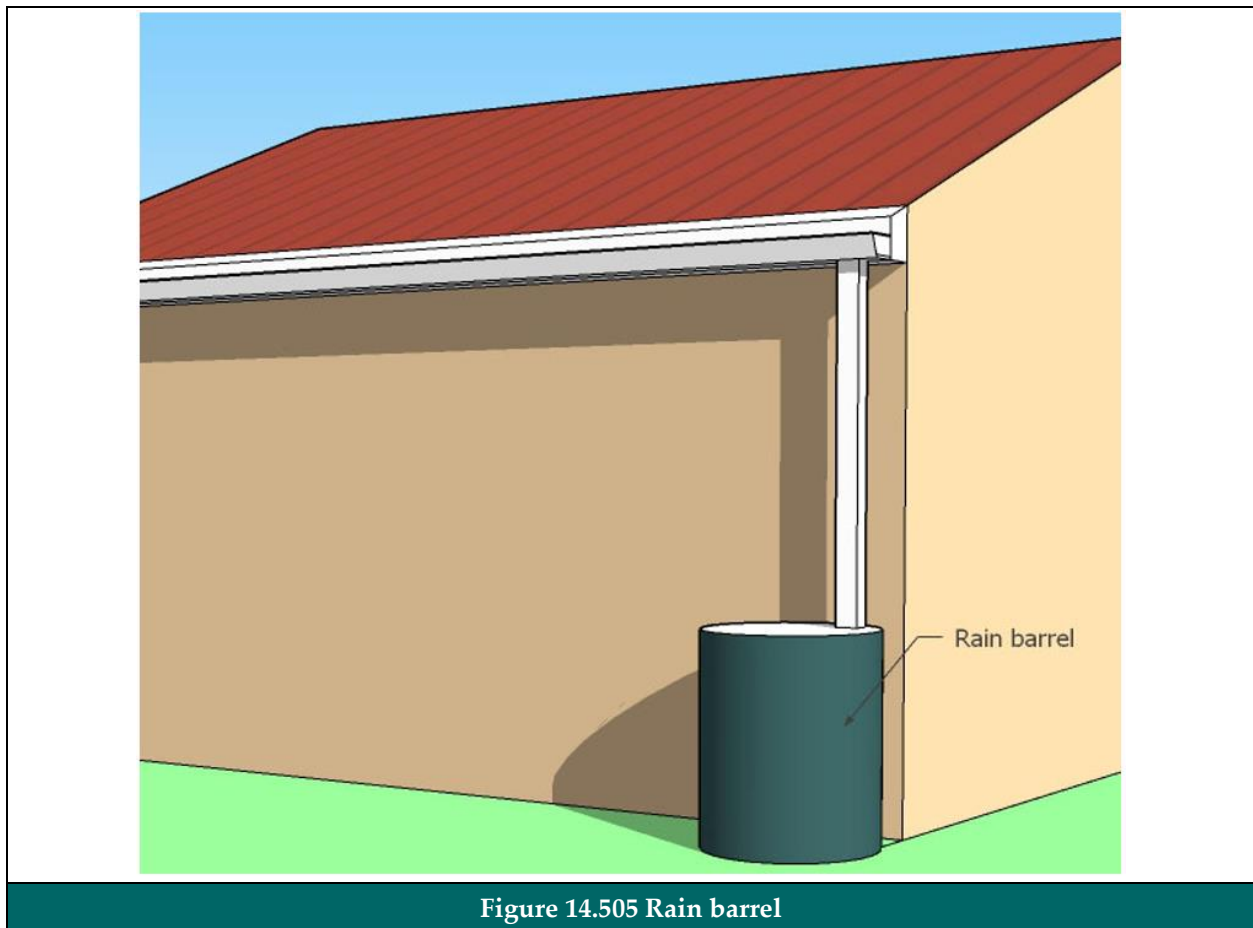


Figure 14.505 Rain barrel

Section 14.506 Rain Garden

A rain garden is a depressed area in the lawn designed to fill with runoff during storm events. It may or may not include subsurface storage in the form of a gravel bed. In designing a rain garden, the permeability of the soils and subsurface conditions must be considered. Rain gardens are generally detention facilities, but on proper soil may also be retention facilities. All rain gardens must be tailored to local soils to reach the desired capacity. These areas shall be planted with forbs and grasses that can be submerged for periods of time. Mesic trees enhance the garden's appearance and can enhance effectiveness through evapotranspiration. Rain gardens should be located so as to receive runoff from downspouts, impervious surfaces, or concentrated sheet flows.

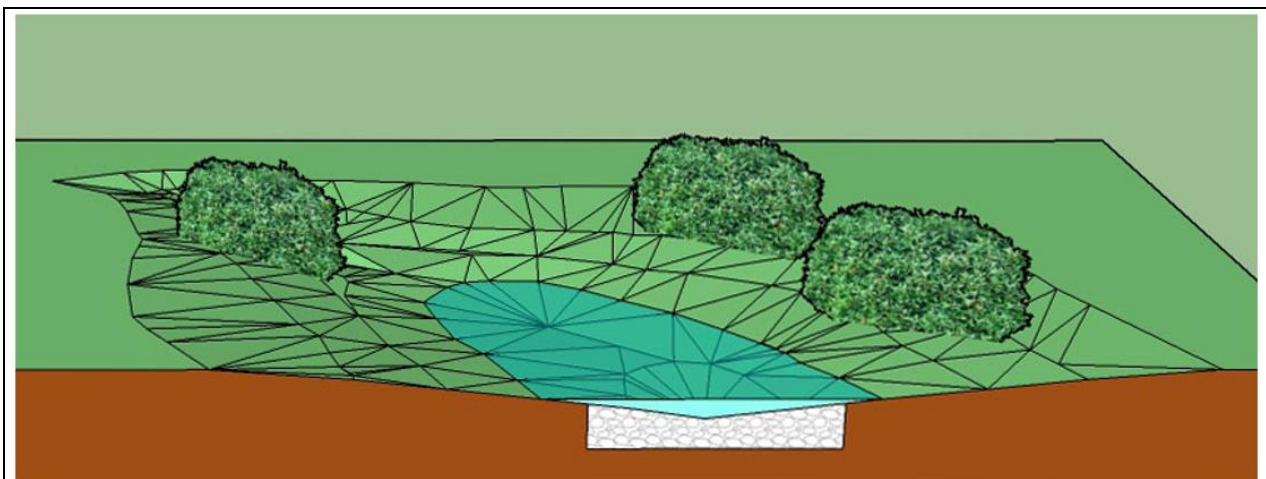


Figure 14.506 Cross section of rain garden with subsurface storage

Section 14.507 Bioswales

Bioswales are the urban equivalent of a rain garden, but are often enclosed, located in or adjacent to parking lots. They may be detention or retention features, depending on soils. Storm water is introduced by breaks in the curbs, drained to the area, or connected to pervious pavement areas so subsurface water flows to them. Islands in cul-de-sacs are another suitable location for these features. They are planted with wetland plants, wet-tolerant trees, or water-tolerant prairie species. The plant material shall be selected so that irrigation is not required. They can be used for snow storage, but plant material must be selected to withstand the depth of snow to be stored.

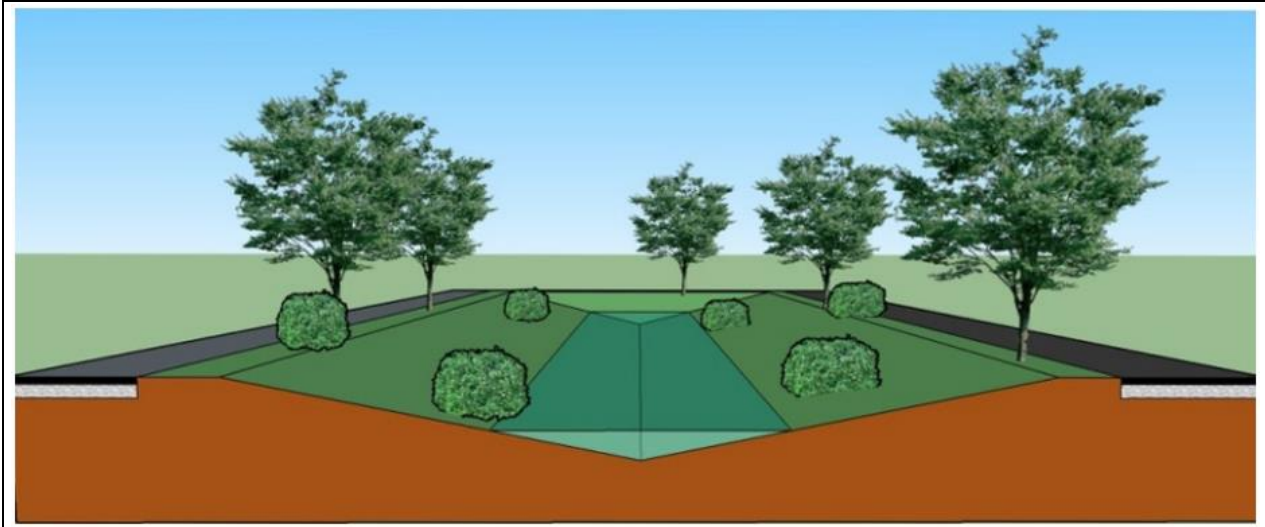


Figure 14.507 Bioswale in parking lot

Section 14.508 Hardscape Detention Features

Hardscape detention is excellent to provide storage in a street right-of-way, as shown in Figure 14.508. They shall have a minimum of 24 inches of subsurface storage, consisting of rock and surrounded by filter fabric. The surface level consists of large stones that allow water to flow to the subsurface storage area. A drain shall allow the water to drain out in no more than 24 hours. They have little to no vegetation planted.

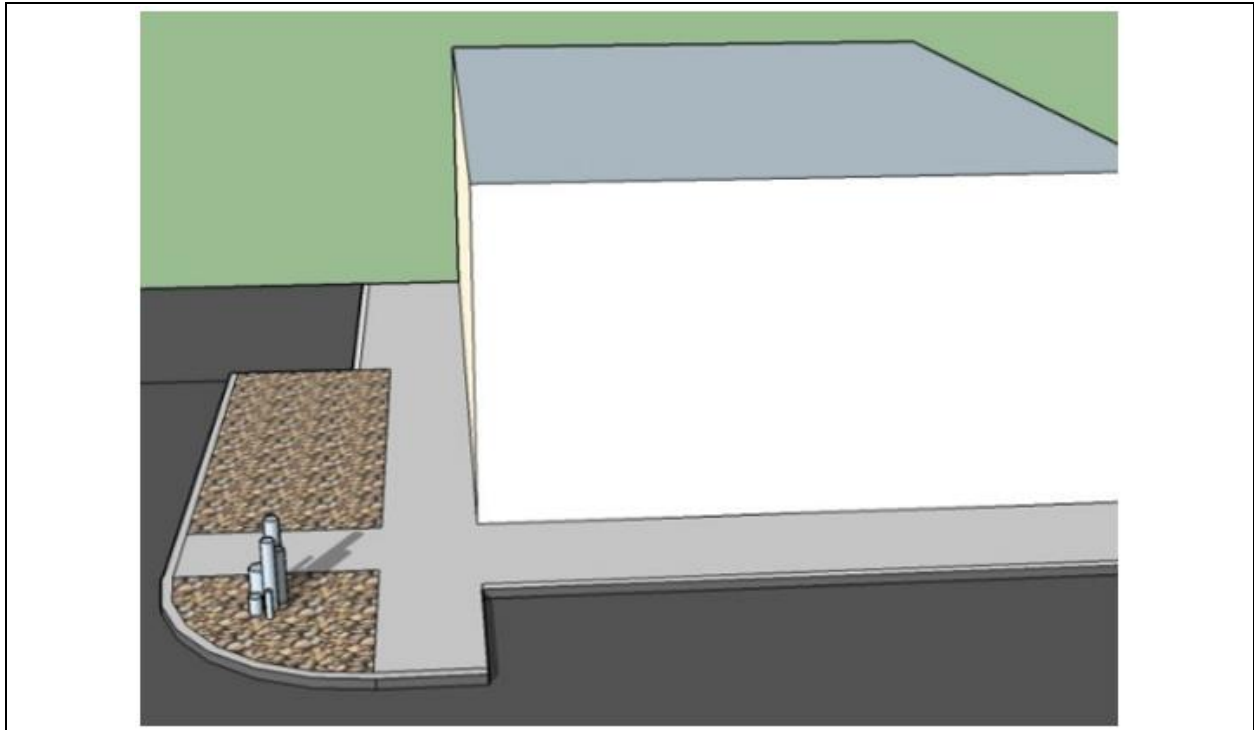


Figure 14.508 Hardscape along street

Section 14.509 Water Features

Water features are a grouping of artificial streams and ponds with recirculating water, often designed as habitat for fish, such as koi. These can be designed to include storm water elements. This can be done by providing a pond with a permanent depth, storage, and storm water overflow. They may also link to underground storage under sidewalks or parking. Water features are fine for mixed-use, restaurants, and other shopping areas where they provide amenities as well as storage. They can be scaled from very small to large in order to achieve some temporary storage in an aesthetically pleasing fashion. Such features require regular maintenance and, if fish are present, the overflow must prevent escape. The inlets need to be designed to trap leaves, seeds, and other material to keep them from entering the water feature and spoiling the water's appearance or damaging fish habitat. In areas with permeable soils, they may be attached to retention facilities below sidewalks or parking.



Figure 14.509 Water feature designed to provide detention

Section 14.510 Pervious Pavement

Pavements are a major source of runoff and replacing roads, drives, or walks with pervious pavement is a method of reducing runoff and removing some pollutants. The following applies to the use of pervious pavements.

- A. Soils. On-site soil information is critical to design. Pavement techniques work best in pervious, well-drained soils, where most of the water is absorbed. In poorly drained, less pervious conditions, detention facilities are necessary.
- B. Subsurface Storage or Retention. Subsurface storage in a trench or vault is surrounded by a filter fabric and filled with stone. These should have a minimum storage depth of one foot. The design should include soil data on recharge potential, fill material storage capacity, and depth. See Figure 14.510. Many facilities will have some recharge and some detention capacity. This design applies to C and D below as well.

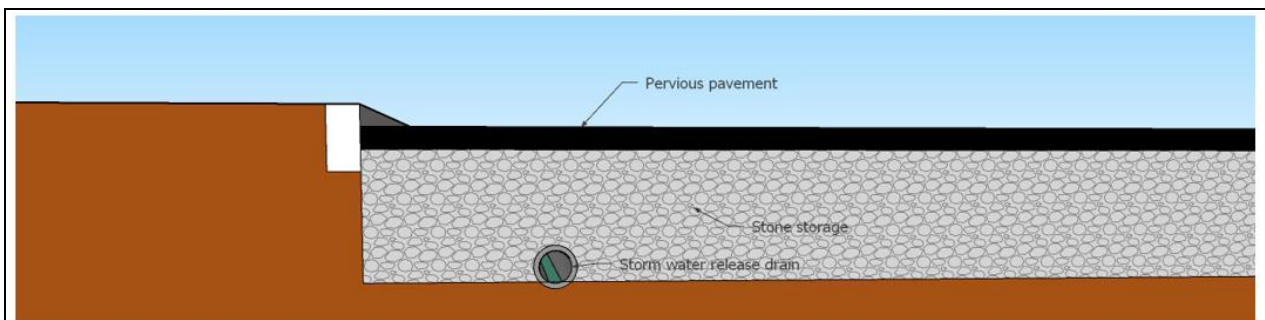


Figure 14.510 Pervious pavement storage and drain

- C. Drainage. If the soils do not have sufficient retention potential for the designed rainfall, they shall be provided with drainage that permits the stored water to be released to storm sewers or surface drainage within 24 hours.

- D. Patios and Residential Driveways. Driveways may use pervious pavements of asphalt, stone, or brick. All patio areas shall be constructed with pervious pavements of stone or brick with subsurface storage and drainage as required in B and C above.
- E. Grid Systems. Grids of concrete or other materials may be used for residential driveways, parking, or storage areas. The voids may be planted in grasses or other approved ground covers. It may be used in small parking areas ([Section 13.509](#)). It may have a subsurface storage area for detention or retention.
- F. Traffic Volumes. Pervious pavements do not hold up to heavy traffic as well as conventional pavements. The engineer shall determine which streets may use impervious pavements to adequately perform over time on an acceptable maintenance schedule.
- G. Street Sweeping. All pervious street and parking lot pavements shall be swept at times during the year to ensure that pervious pavements retain their permeability by removing leaves, litter and materials from road and tires that accumulate. The engineer shall determine the required number of cleanings and their timing for sweeping. The jurisdiction shall provide sweeping for public streets. Pervious parking lots and private streets shall be swept by the owners as required by the jurisdiction.

Section 14.511 Swales

Swales are shaped ditches that have a permanent ground cover and convey storm water on the surface instead of in storm sewers. They have three advantages over storm sewers: the grass traps some solids, cleaning the water; the friction of grasses slows the rate of runoff; and some water is absorbed into the soil, reducing the quantity of runoff. The following are different applications of the concept.

- A. Simple Swale (Figure 14.511A). This is a gently sloping, linear drainageway that is planted in grasses. The slope of the channel determines flow rates and must be limited to slopes that preclude erosion. It needs one in three side slopes to permit mowing.

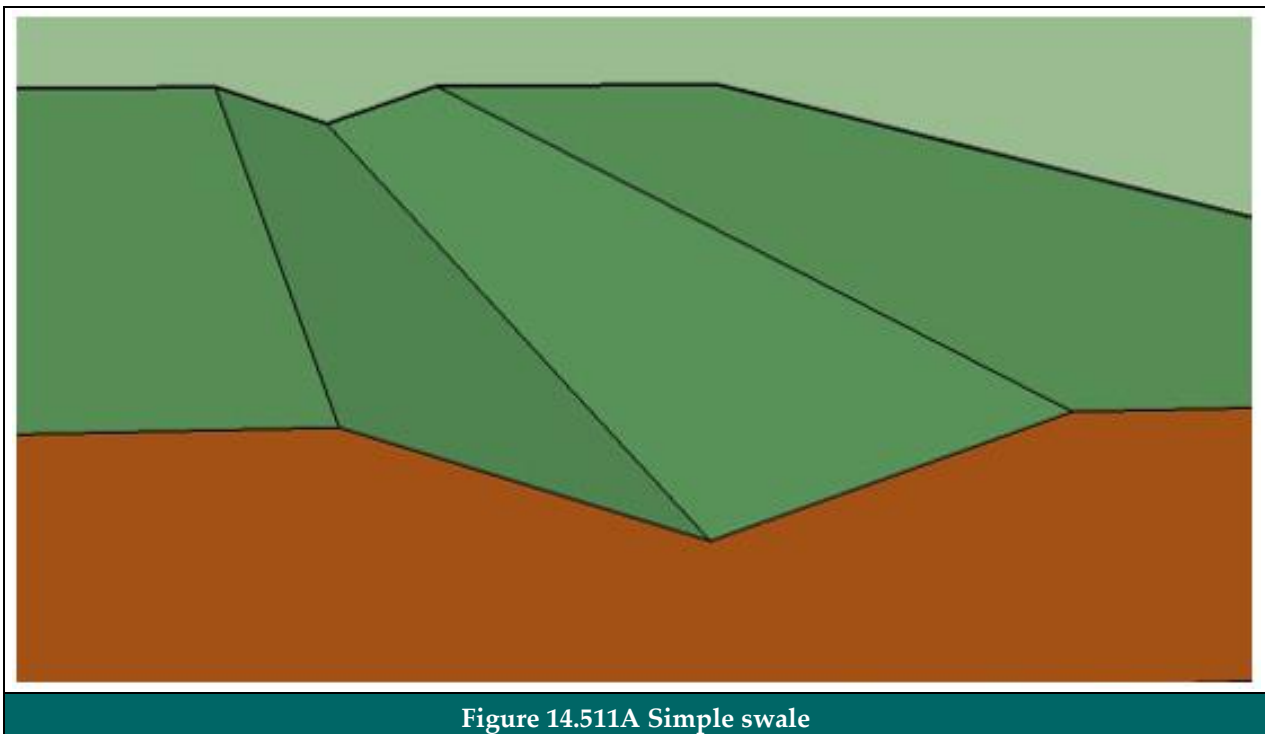


Figure 14.511A Simple swale

- B. Swale with Subsurface Storage (Figure 14.511B). The capacity of the swale to reduce or slow runoff can be improved with a subsurface storage area. A trench or vault filled with stone with a minimum depth of two feet serves as storage. In well-drained soils, this may primarily serve as recharge. In less permeable soils, a drainpipe may be needed as an ultimate release mechanism.

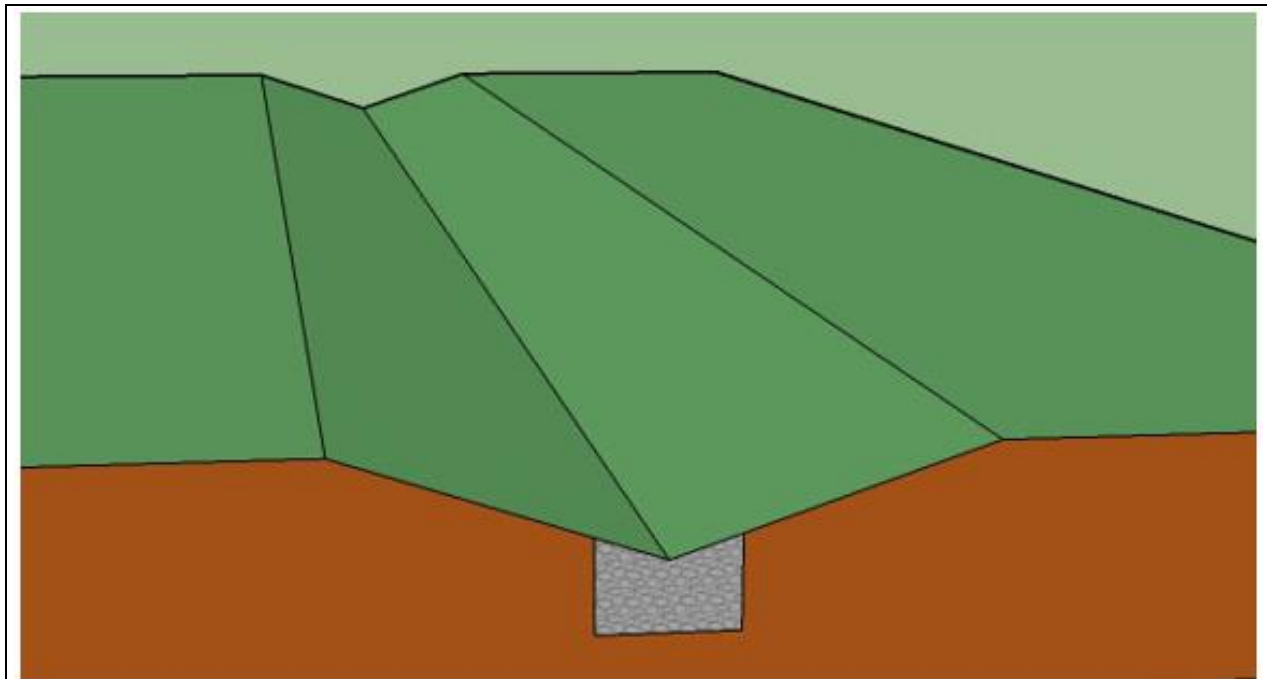


Figure 14.511B Simple swale with underground detention storage

- C. Flat Bottom Swale (Figure 14.511C). This improves on either A or B above by increasing the flow capacity of the swale without accelerating flows. Using taller grasses or wetland plants can increase the coefficient of friction, further slowing runoff and increasing evapotranspiration and recharge.

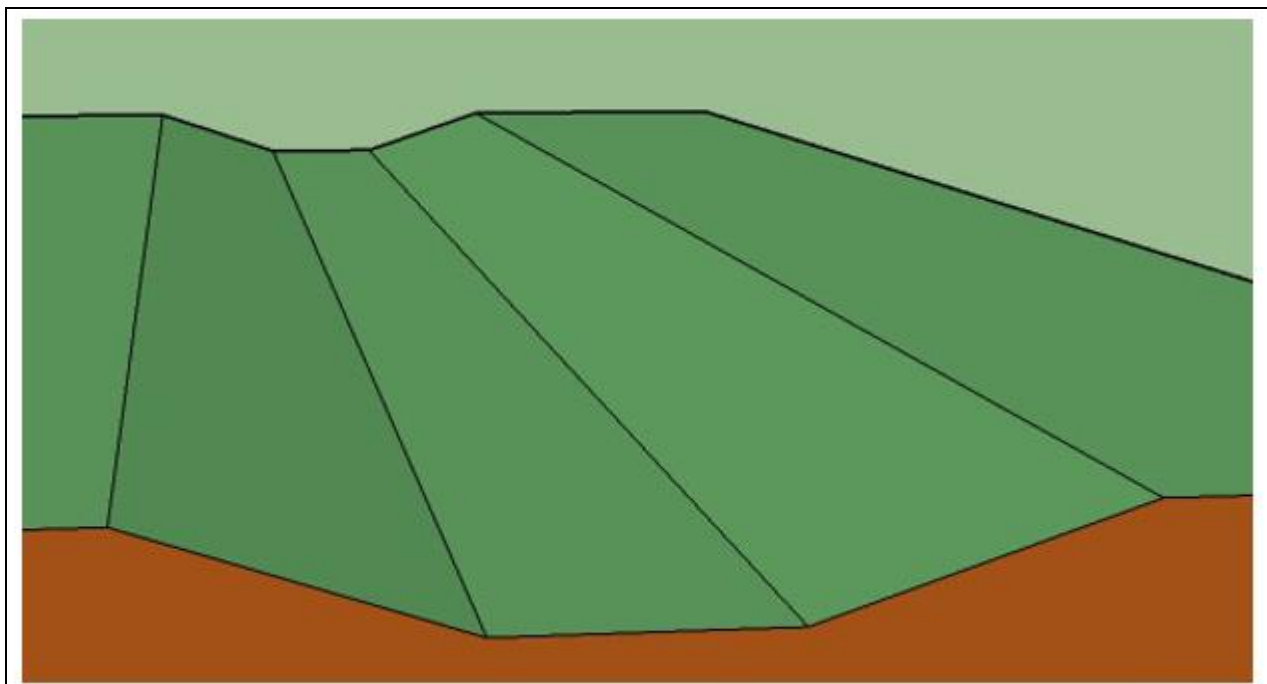
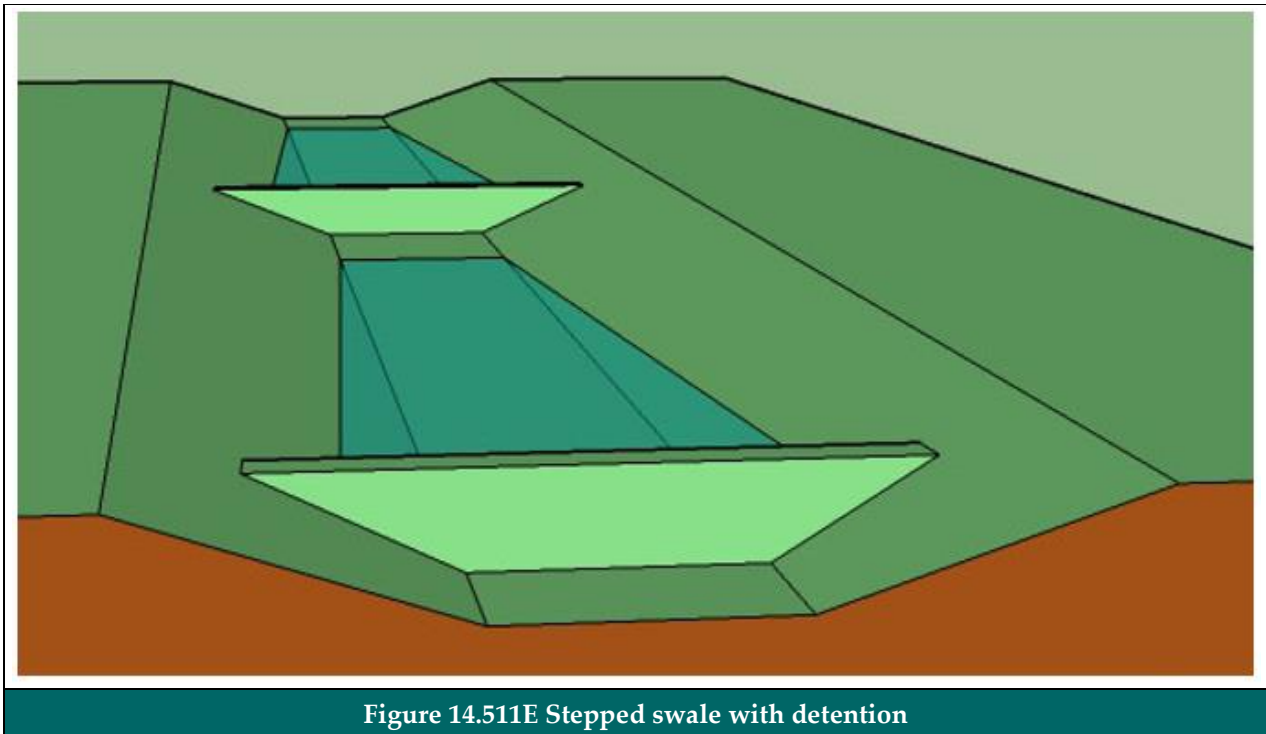


Figure 14.511C Flat bottom swale

- D. Wetland Swale. These are appropriate in flat bottom or stepped swales where the water table is near the surface so that wetland plants have adequate moisture. These are far more effective than normal grass swales because there is a higher level of friction due to the plant material, and the vegetation improves water quality. Where wetland and prairie plants are used, side slopes may be one in two, provided they will not be mowed.

- E. Stepped Swale (Figure 14.511E). Stepped swales take advantage of slopes to create a series of check dams made of pervious materials sand and gravels or solid materials that, during peak flows, create a series of ponds. These provide storage in the storm water conveyance channels and decrease flow rates. Such facilities may also be underdrained, as in B above, in order to increase storage potential.



- F. Rock Swale. These swales are installed on moderately sloped land where erosion potential is too great for a grass swale. A meandered ditch is created to increase the channel length, slowing runoff. The swale is filled with boulders and large diameter streams or beach stones to prevent erosion.

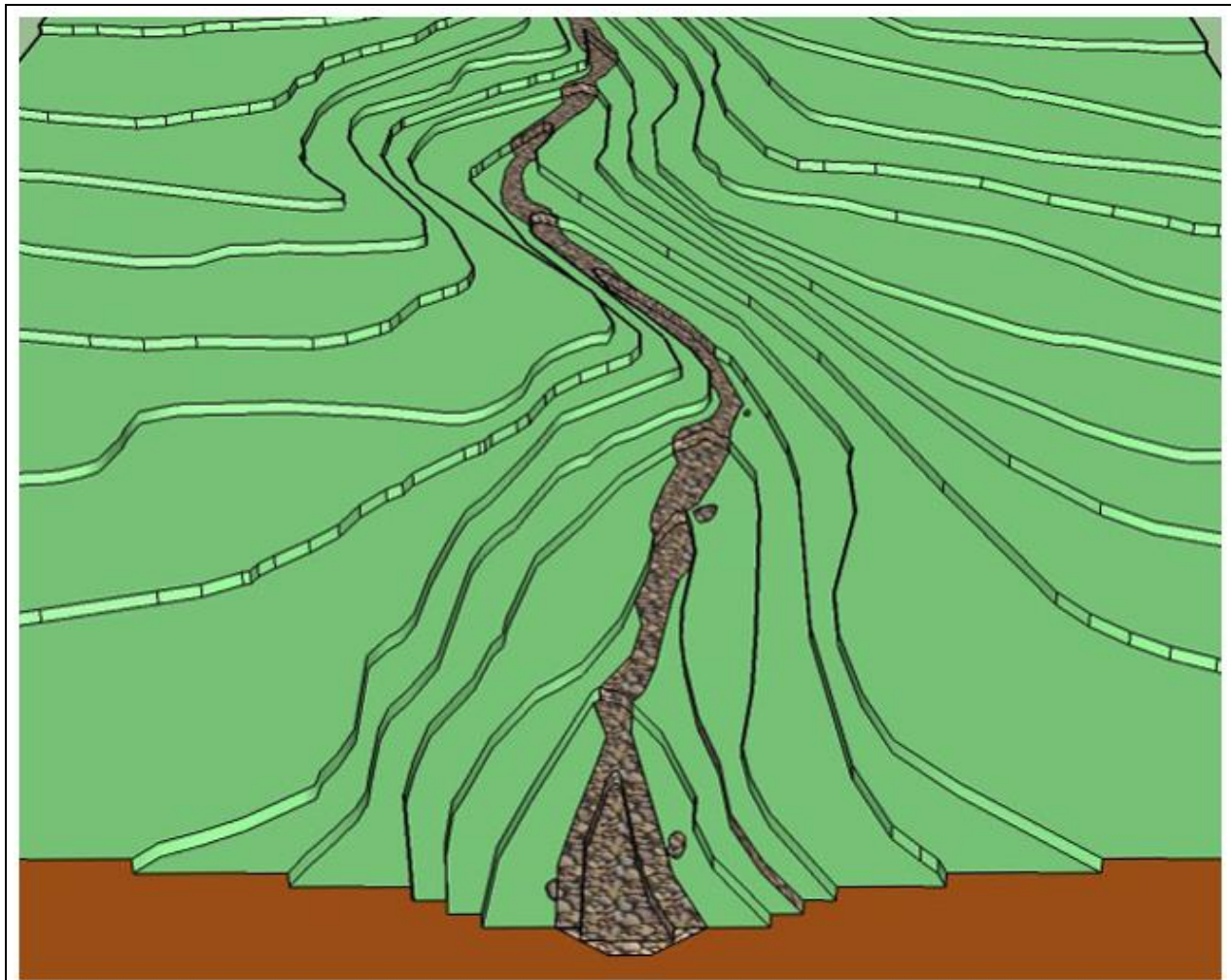


Figure 14.511F Swale with streambed of rocks

Section 14.512 Drainageway Soils

Natural drainage patterns are identified by linear soil patterns. These soils have high water tables or alluvial soils that carry storm water during intense storms. They are ideally suited for detention, as part of a linear storm water facility. The following elements should be considered, as urbanization will increase runoff so improvements will be needed in order to reduce flooding and clean the water.

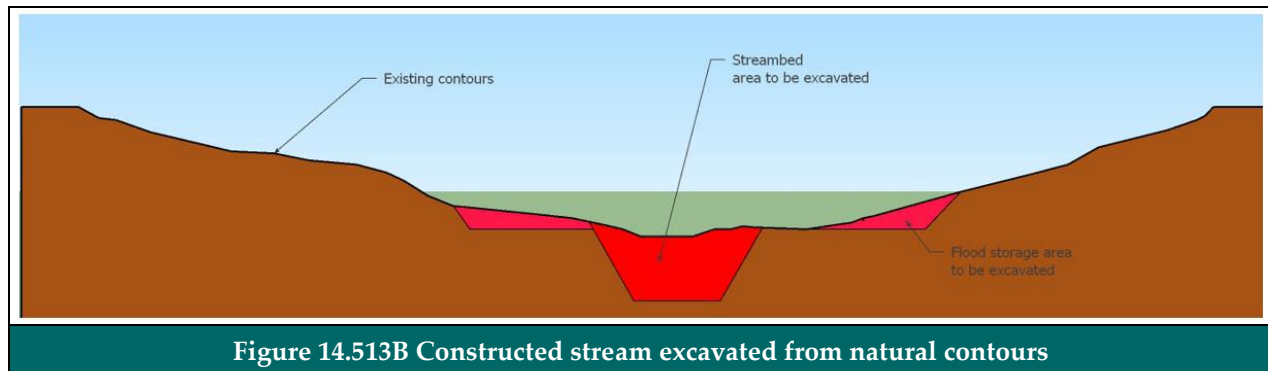
- A. Detention Ponds. Drainageways are a logical place for detention as they are likely the lowest point on the site. On larger sites, multiple detention ponds can be created along the length of the drainageway. Multiple ponds slow overall runoff discharge rates and provide storage and infiltration potential, reducing the total size of detention.
- B. Storage Capacity. Because these areas are outside the floodplain mapping limits, the developer's engineer shall identify the current levels of flooding and seasonal water tables. Dams are required to raise the level of water above the current seasonal high-water tables to increase storage.

Section 14.513 Enhanced Surface Drainage

Sites with swales, drainageway soils, intermittent streams, or small perennial streams offer a natural approach to storm water conveyance and storage. Often, these are completely regraded for lots, streets, and storm sewers. The alternative is grading to enhance storm water storage and slow runoff. The following elements should guide this process.

- A. Current Vegetation. This technique is best applied in areas that have been farmed in the past and have little forest cover. It shall not be used in wooded watershed areas.

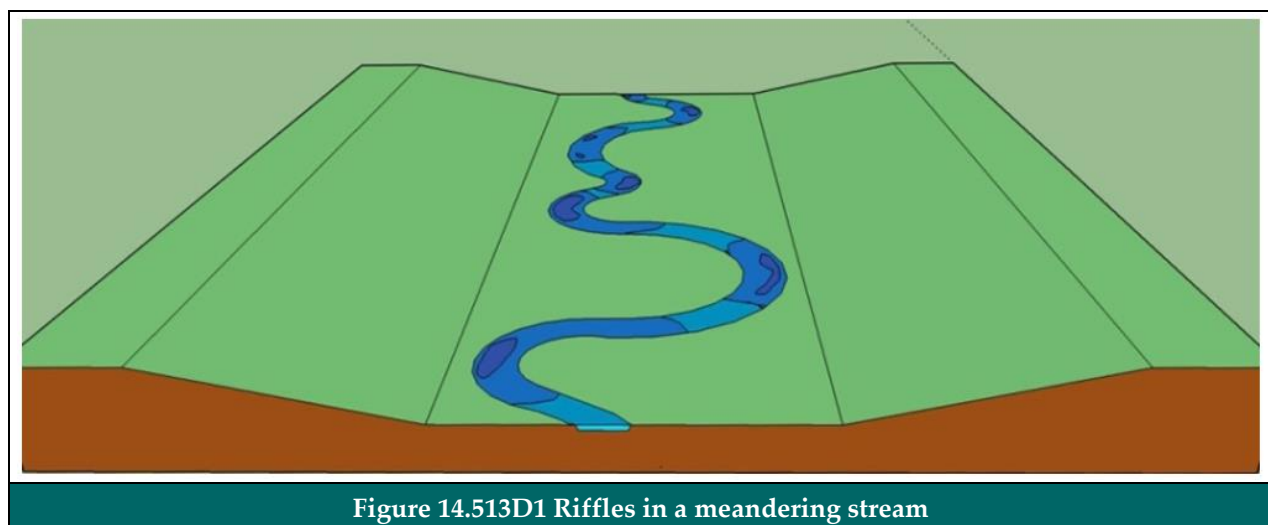
- B. Excavation. Areas of swales or intermittent streams without mature stream channels can be graded to create a streambed or channel designed to enhance storage and improve water quality. Land excavated on either side of the channel can increase the total storage capacity of the floodplain (Figure 14.513B).



- C. Stream Alignment. Straight streams (Figure 14.513C1) are the shortest and steepest and result in more rapid concentration of storm water and little chance for infiltration. Streams that meander increase the total length, decrease slope and rate of flow, and provide greater instream storage capacity. Altering stream alignment to create meanders is desirable (Figure 14.513C2).



- D. Pools and Riffles. In natural meandering streams, pools and riffles slow flows and increase oxygenation, improving water quality. The creation of pools and riffles can enhance the storm water management of new streams. Figure 14.513D1 shows location of riffles and pools. The pools are aquatic habitats and the riffles aerate the water and, in combination, improve water quality. When channels are reconfigured to create meanders, pools should be dug out and gravel installed to create riffles. The design should increase total storage capacity in the channel for high-frequency storm events. Figure 14.513D2 shows a cross section of a stream with pools and riffles.



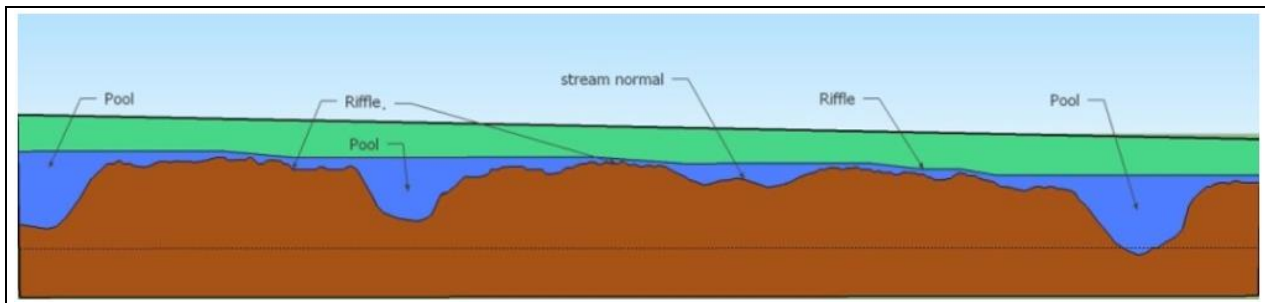


Figure 14.513D2 Cross section of stream channel with pools and riffles

- E. Floodplain. Grading in the floodplain is permitted where it enhances the cross-sectional area of the floodplain, increasing the storage capacity over the existing conditions. All fill shall be deposited above the existing flood elevation, except material used in creating dams.
- F. Streambed Design. The engineer shall determine the permitted slopes of the channel based on soil erosion potential and stream flow velocities. Where erosion potential is higher, a variety of techniques may be used to decrease erosion.
 1. Flatter side slopes are appropriate in larger pool areas where flows are slow and vegetation can more easily resist periodic inundation.
 2. Steeper slopes should be used only where soils and bank vegetation reduce erosion potential.
 3. The use of stone can provide armoring of the stream banks where there are easily eroded soils or high flow velocities. See [Section 14.511F](#).
 4. In easily eroded areas, stabilization by vegetation is preferable to the use of stone structures. Willow bundles should be planted at the top of the bank where slopes are flat or graded to a gentle slope (Figure 14.513F).

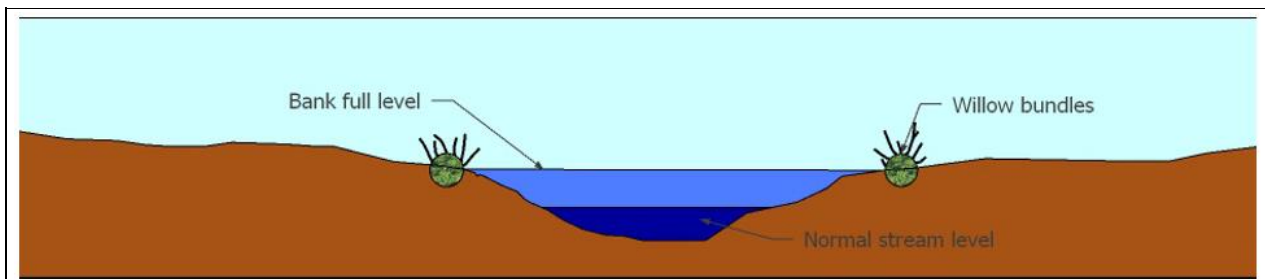
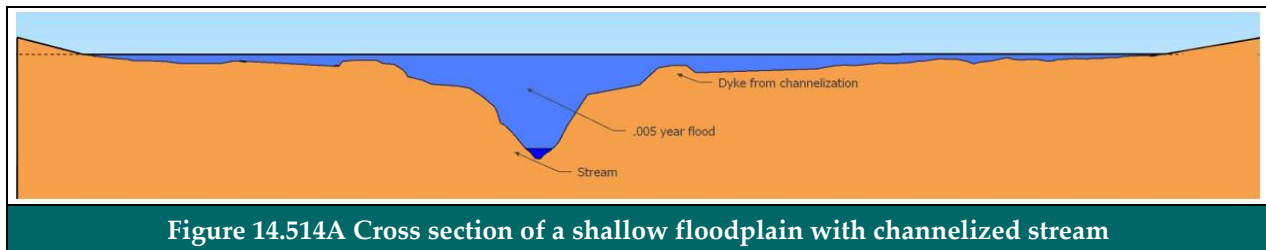


Figure 14.513F Placement of willow bundles to stabilize stream banks

Section 14.514 De-Channelization

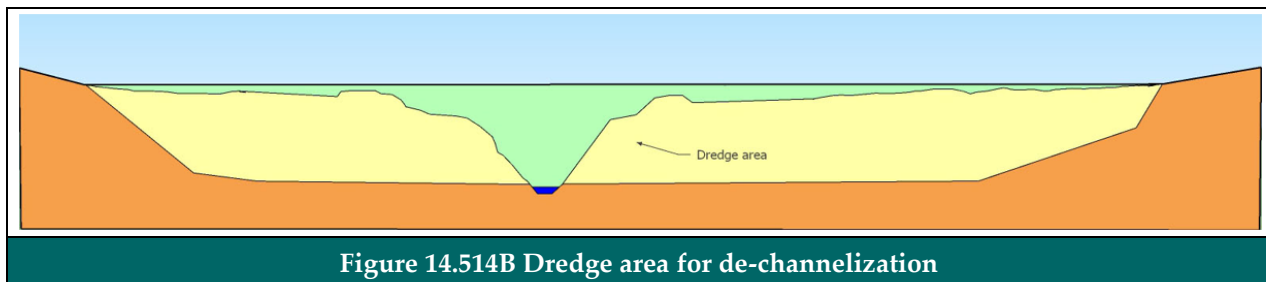
This is a form of storm water management and flood mitigation that is suitable for areas with wide shallow floodplains where the stream has been straightened and channelized. De-channelization returns the streambed to a natural condition and increases flood storage capacity, providing more buildable land. The following standards apply to de-channelization.

- A. Survey. The site shall be surveyed to determine the elevation of the bottom of the stream channel, top of bank, any fill areas, and flood elevation. A cross section shall be prepared every 100 feet (Figure 14.514A). The seasonal high-water table shall be determined.



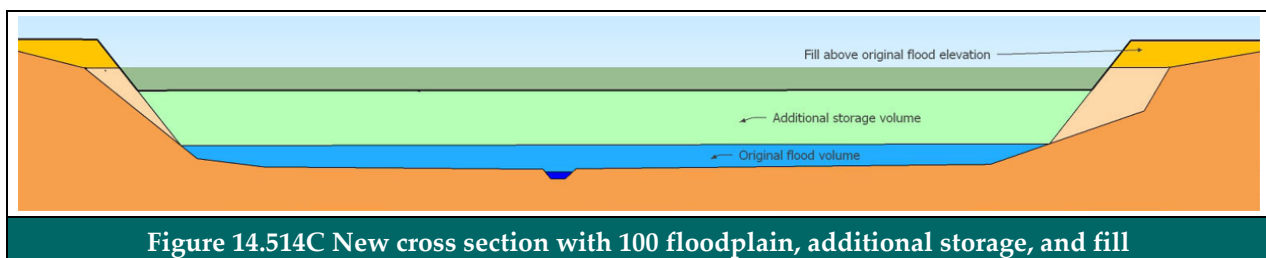
B. De-Channelization. A new floodplain shall be created by excavation, as indicated below and in Figure 14.514B.

1. All fill from the channelized stream shall be removed.
2. The area in the existing floodplain shall be excavated and fill placed above the current .005 ASF flood boundary.
3. The stream channel bottom should be lowered at least one foot on the property, with some areas lowered below seasonal high-water table to create pools.
4. The channel length shall be increased by creating meanders. The goal is to increase channel length to slow flow and increase storage of the stream during bank full-flow conditions. The amount of storage shall be calculated.



C. New Cross Section. The plan shall provide a new floodplain cross section to achieve the following:

1. Create a cross-sectional area that is a minimum of three times the current cross-sectional area. (Figure 14.514C).
2. Oxbow type ponds or constructed wetlands should be encouraged to help clean the storm water during flood events.
3. At the downstream end of the de-channelization, the stream shall be returned to the existing cross section 20 feet from the downstream property line. This shall be engineered so as not to increase downstream flood elevations.



- D. Flood Elevation. The flood elevation at the downstream end, accounting for the additional storage, shall be at or below the current .005 APS flood elevation. This new cross section will accommodate a .005 APS storm at a lower elevation so that the excavated area will store water from a more intense storm without increasing the .005APS flow downstream.
- E. Revegetation. The excavated area shall be seeded with mesic grasses and forbs. Wetland plants or mesic trees may be planted with the approval of the urban forester.

- F. Fill. The fill created from the excavation shall be placed along the fringe of the original floodplain. It shall be placed so as to provide at least two feet of freeboard above the original .005APS flood elevation (D above). This may result in fill placed in the outer area of the existing .005 APS floodplain. A new floodplain shall be approved by FEMA. No development is permitted in land below the old .005 APS floodplain elevation.

Section 14.515 Road Location

Traditional subdivision design practice often locates roads in low points where the roads convey floodwater when storm sewers are at capacity even when the road is not in the floodplain. The result can be flooding to the extent that access becomes unsafe. Placing roads on higher ground and draining storm water to natural water courses has many environmental advantages and is less costly. There are three design options that keep roads from flooding.

- A. Ridge Line Roads. Roads should be located on ridge lines to promote storm water from streets, drives, and buildings to be drained to the low points and natural water courses. The following design elements pertain to this approach.
1. Roadside ditches should be used where lots exceed 7,000 square feet.
 2. Grading of the lots ensures water flows around homes and not into garages via side lot-line easements.
 3. Open space breaks with a minimum width of 15 feet provide corridors where ditches or storm sewers can discharge to lower ground. Ditches and storm water easements should be shallow and designed to be grassed.
- B. Parkway Roads. Parkway roads can be designed with a large median that accommodates a stream channel and floodplain. This can be via an existing stream or a swale contoured to create a stream and flood storage during flood events (Figure 14.515B).

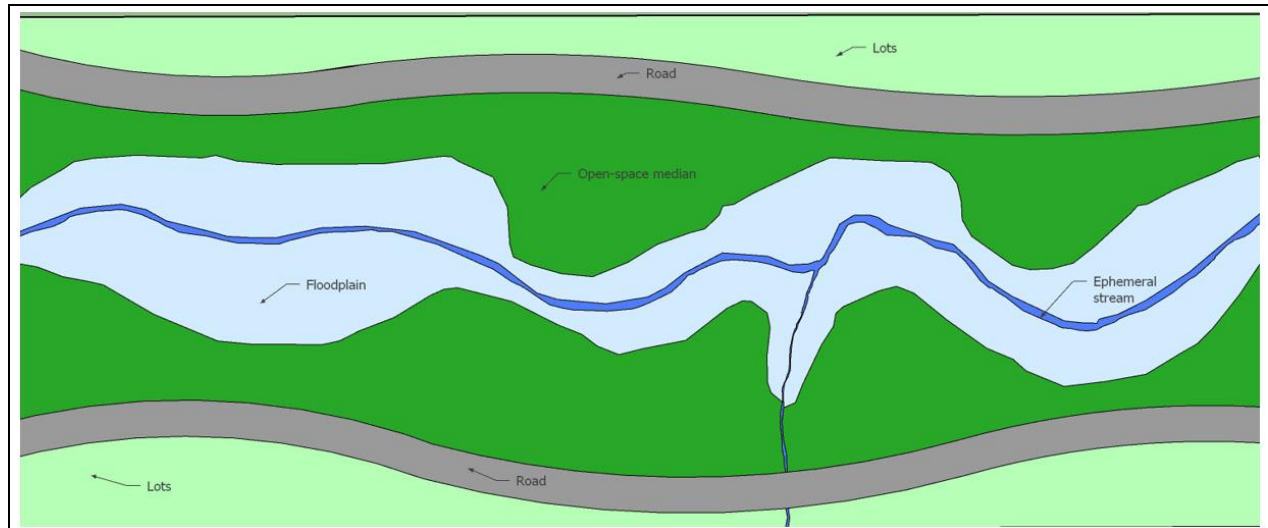


Figure 14.515B Median road with storm water management in median

1. The interior of the roads shall not have curbs so that water drains to pervious areas, enhancing recharge and improving water quality. The water stored in medians shall be a component of the detention or retention system.
 2. The median is open space and shall be landscaped with plant materials that encourage transpiration to reduce runoff.
- C. Road and Stream. A road can be designed to parallel a swale, stream, or storm water conveyance but shall be elevated so as not to flood during a .005 APS storm. This may be costly because it requires large culverts or bridges to access property on the other side of the watercourse.

Section 14.516 Grass Filtration

Where storm sewers are used, grass filtration can be employed to clean the water, slow flows, and promote some infiltration instead of using curbs to direct storm water to storm sewer inlets. No curbs are provided, allowing the road water to flow into the parkway lawn. This requires a sloped parkway, so storm water drains away from the road, and grates located in the parkway or in driveways to convey the storm water to a storm sewer (Figure 14.516).

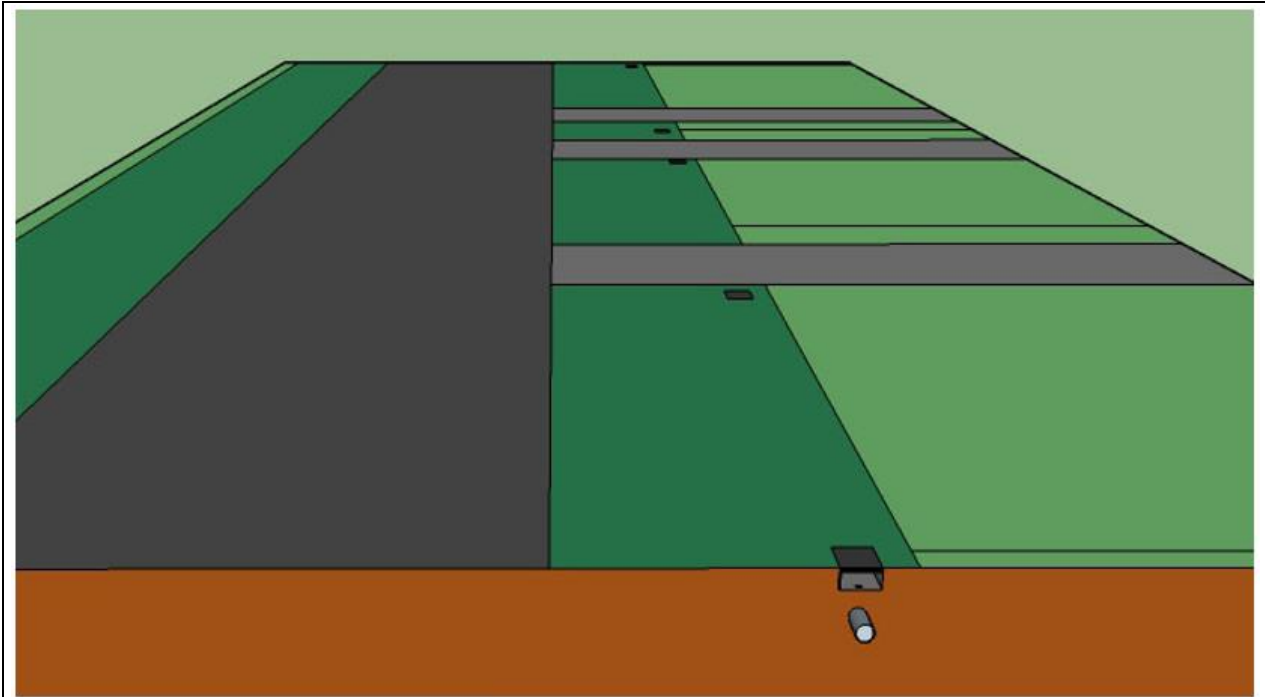


Figure 14.516 Grass filter strip drained to storm sewers

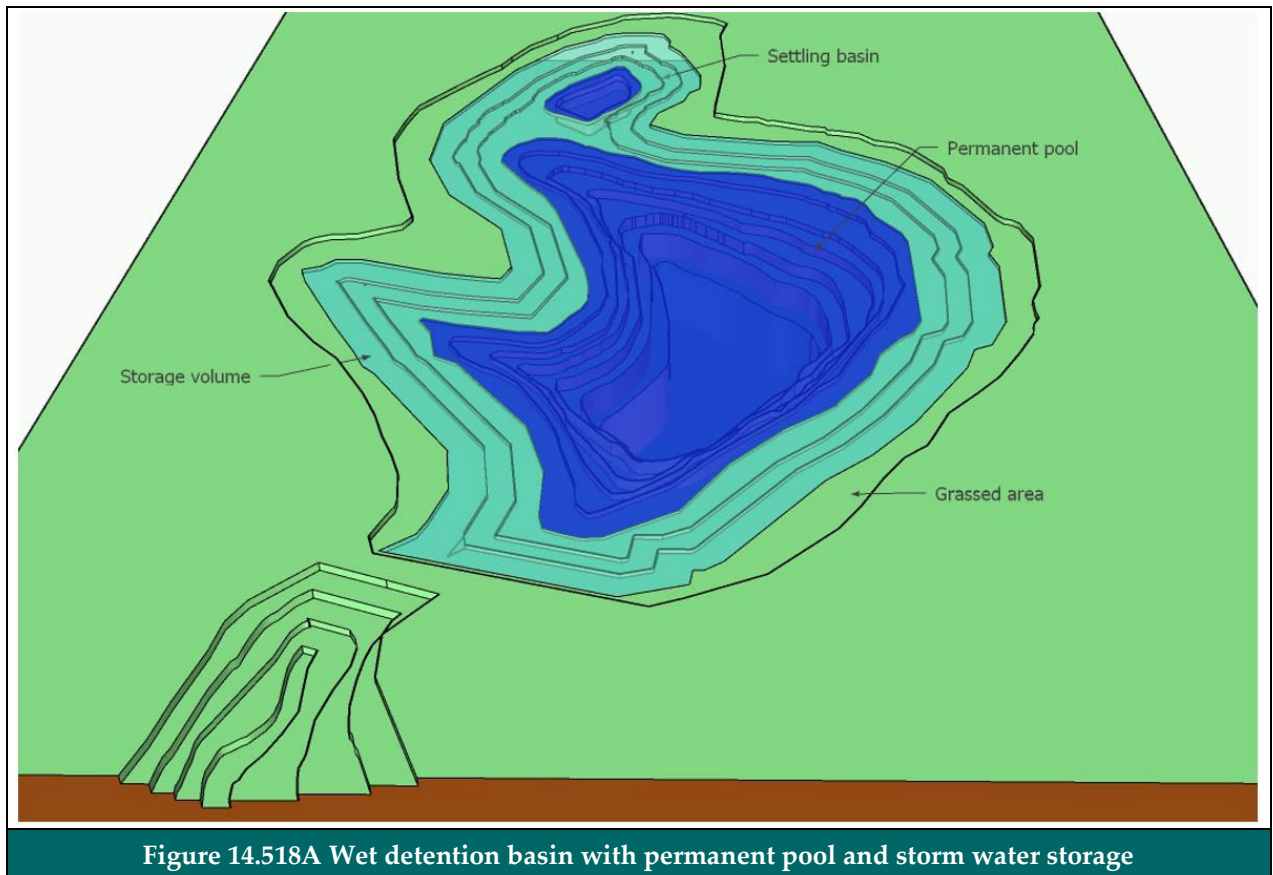
Section 14.517 Grass Filtration with Curbs

Curbs are often needed to keep parking on roads. Swales or bio-retention can be used by providing curb breaks every 50 feet or between parking spaces to keep flow volumes low. Concrete or rock spreader may be required if swale slopes are steep enough to create erosion and preserve grass cover.

Section 14.518 Detention Basins

Detention basins are designed to temporarily store storm water and release it within 24 hours. The basins may be wet or dry. Wet basins are designed to have a permanent pool of water. Dry basins are designed to be drained dry after storm events. All basins shall meet the requirement of C through E below.

- A. Wet Storage. Wet storage shall have a permanent pool of water either by excavating below the water table or by lining the basin to retain water (Figure 14.518A). If the pool is intended to provide fish habitat, at least 10 percent of the basin shall be eight feet in depth (two feet below the freeze depth in the area). Liners are required in areas of karst, where sinkholes are a problem.
- B. Dry Storage. Dry storage basins shall be graded so as to drain to the discharge point without ponding and have a low point at least one foot above the seasonal high-water table to avoid long-term inundation that makes maintenance difficult. All such basins shall have a grass cover or grassland plantings of grasses and forbs. They shall be graded to permit mowing, and grasslands should be mowed annually. See Figure 14.518B.



- C. Primary Storage Basin. A primary basin shall be built adjacent to the downstream end of the basin and shall contain at least 90 percent of the storage capacity.
- D. Storage. The volume above the permanent pool level (wet basins) or bottom of the basin (dry basins) to the point of emergency outflows shall constitute the storage.

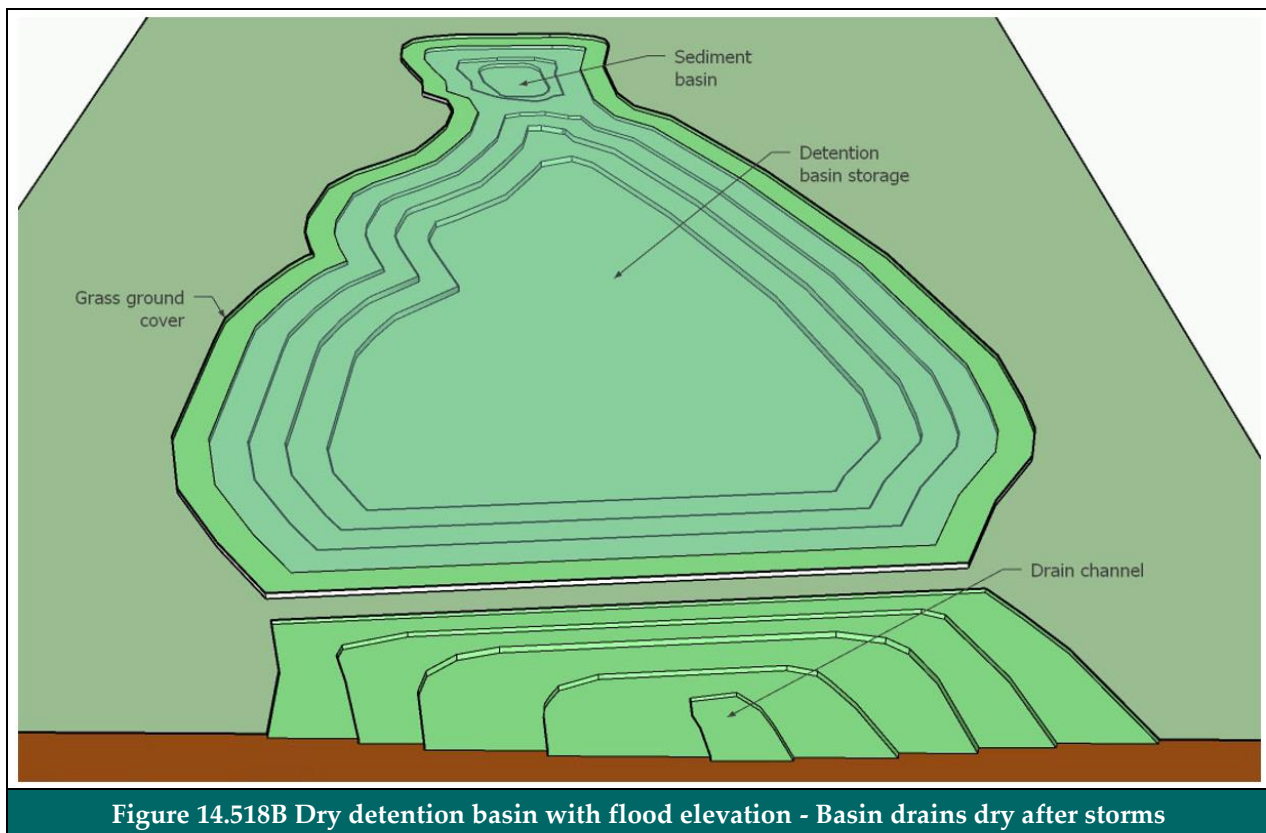


Figure 14.518B Dry detention basin with flood elevation - Basin drains dry after storms

- E. **Settling Basin.** A settling basin shall be installed at the inlet to the basin, designed to allow solids to settle out before entering the primary basin. Access shall be provided to this area for maintenance and removal of sediments.
- F. **Wetland Filters.** The settling basins and edge of the permanent pool for wet basins shall be planted with wetland plants and hydric grasses or prairie plants to improve water quality and better trap solids.

Section 14.519 Detention with Irrigation

Wet detention basins in areas with a wet and dry season can be designed to provide irrigation. This also aids water conservation. Construction of these wet basins is similar to that specified in [Section 14.518](#), except that they have two pool elevations: maximum pool and permanent pool elevations, the difference being the volume available for irrigation. As the dry season approaches, the drain from the permanent pool elevation is closed so the basin stores water for irrigation to 90 percent of the maximum pool elevation. Stored irrigation water results in reduced detention during the dry season, but there shall be an easily activated drain for the permanent pool elevation, so storage can be created if a heavy rain is forecast in order to protect against flooding. Pool edges shall be designed to allow for drawdown and prevent erosion. Walls, stone riprap, or wetland or prairie vegetation can achieve this. Vegetative areas require wetland or hydric prairie plants that tolerate changing water elevation and shall be approved by the urban forester.

Section 14.520 Retention Basins

Storm water retention basins differ from detention facilities in that they do not release water downstream, except in extraordinary storms where storm water exceeds the basin design (Figure 14.520). They function by holding water in the basin until it infiltrates to the groundwater. These are permitted only in highly pervious soils with an infiltration rate of over 0.3 inches per hour. The following design criteria apply to these basins.

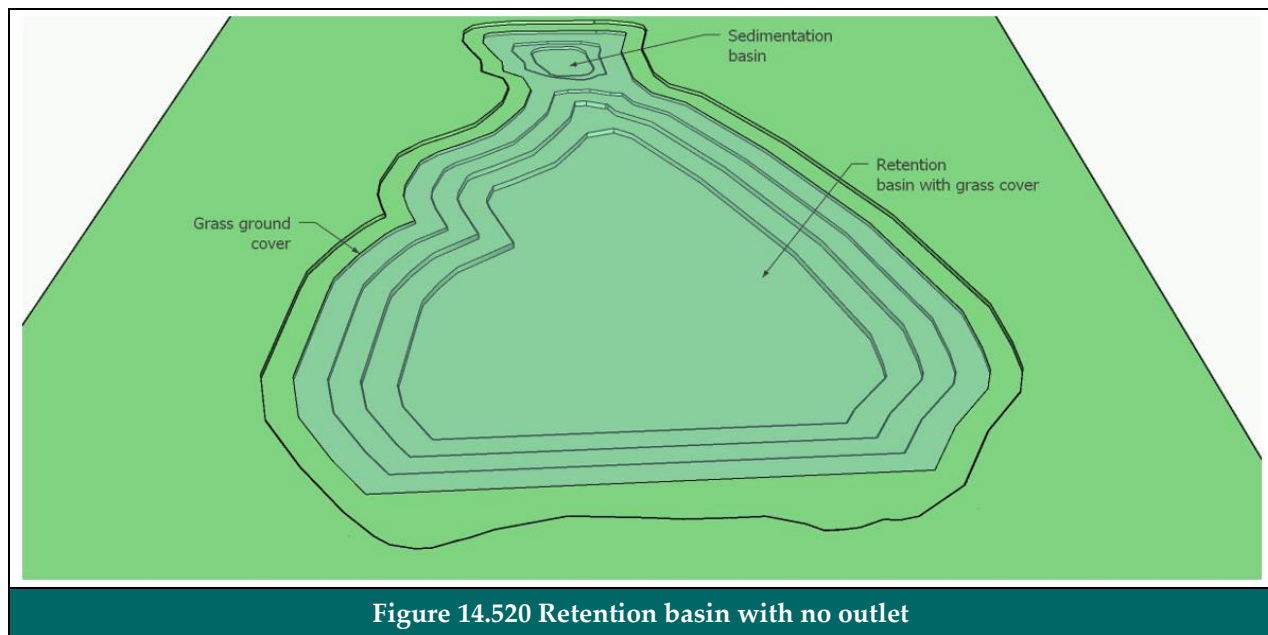


Figure 14.520 Retention basin with no outlet

- A. **Primary Infiltration Basin.** The infiltration takes place on the basin bottom and sides. The bottom should have slopes of less than 5 percent. The basin shall be maintained in a grass cover and side slopes that resist erosion.
- B. **Settling Basin.** A settling basin shall be provided at inlets to the basin. A level spreader shall be provided at the outlet of the settling basin to disperse the water in a thin sheet down a grass slope to the basin floor. It shall be designed to prevent erosion and trap solids to prevent them from entering the primary basin, where they can lower infiltration rates.
- C. **Design.** The primary basin bottom shall be at least 10 feet above the seasonal high-water table and 25 feet above any aquifer, bedrock, or impermeable layer. The basin shall be designed to draw down within 36 hours after a .005 APS storm. The engineer shall approve the design after reviewing soils and borings to determine that the basin can function as designed over time. The basins shall be designed to provide 120 percent of the design capacity in order to enable them to function over time with some clogging of soils.

Section 14.521 Constructed Wetlands

Constructed wetlands are dry land areas that are excavated to below the seasonal high-water table and then planted with wetland vegetation. They are similar to wet detention basins except that they are shallow with limited storage capacity from a permanent pool elevation to an existing surface outlet. They differ in that they are designed to have 75 percent of the bottom planted with emergent wetland vegetation. Above the pool elevation, grasses and forbs that are classified as wetland plants or hydric prairie plants shall be installed, as approved by the urban forester. The storage capacity shall be provided by using the excavated material to create an enclosure that increases storage capacity above existing grades at the lower end.

Section 14.522 Agricultural Wetlands

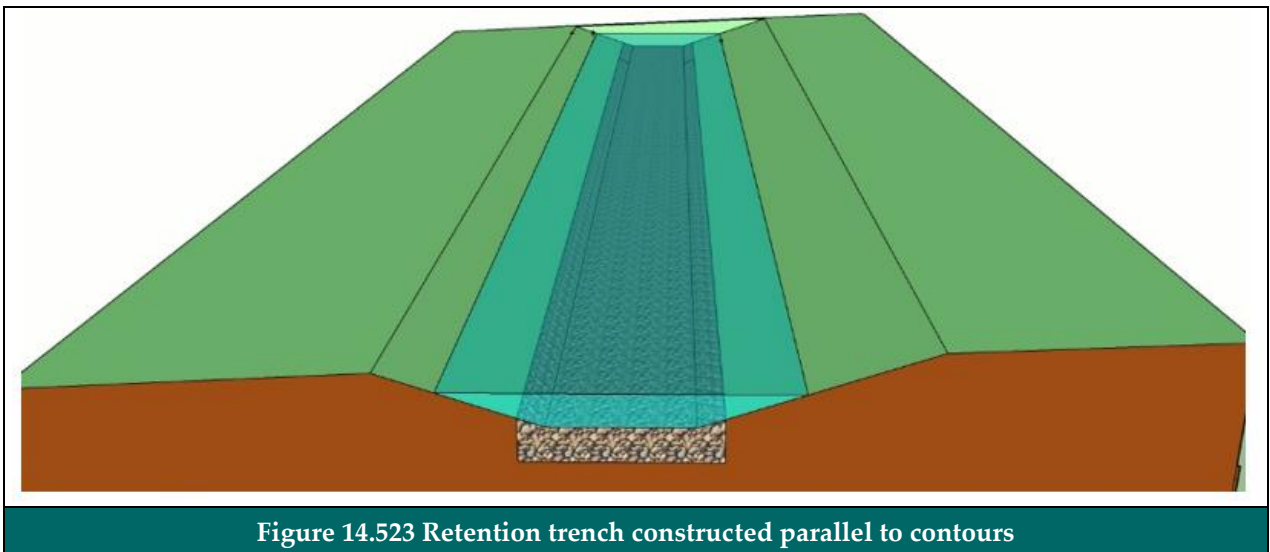
Agricultural wetlands are wetlands that have been tilled for a period of years and drained or otherwise had their seed banks degraded. They are ideally positioned to serve as detention facilities. Where present on a site, agricultural wetlands should be used for storm water management. The following rules apply to the conversion of these wetlands to detention facilities.

- A. **Elimination of Drains.** Most agricultural wetlands have been drained either by tiles or ditches, and these shall be eliminated or plugged so as to restore the normal seasonal high-water table.

- B. Outlet. Grading shall be done to provide an area one foot above the maximum pool elevation. An overflow outlet shall be provided. A drain outlet for release of storm water shall be installed to draw down the pool to the seasonal high-water table elevation within 24 hours.
- C. Pool Elevation. The maximum storm elevation shall be designed to provide for a .005 APS storm for the watershed contributing to it.
- D. Fill. If the agricultural wetland is divided by a property line, filling to create a dam to contain the storage on the developing property is permitted. The engineer may require special construction to ensure the dam is as narrow as possible. The basin shall be increased to provide 1.5 times the storage lost to the fill.
- E. Settling basin. A settling basin as described in [Section 14.518](#) shall be provided.

Section 14.523 Parallel Detention/Retention

A detention/retention trench is intended to capture storm water on sites having a long downhill side. The land is graded to provide a swale, parallel to the contours, to capture sheet flows and store water. A trench or vault filled with gravel at the bottom of the swale can increase capacity of the surface area for infiltration. In detention trenches, a release outlet shall be provided. In soils with high permeability, this can provide retention. See Figure 14.523.



Section 14.524 Detention Channels

Detention channels are linear with side walls approaching vertical that provide storage and, in some cases, retention. These are more important in urban areas, where land for more natural storm water basins is not available. They are designed to fit into the urban landscape and have steep sides, permitting a depth of storage that is not possible with more natural configurations. The following rules apply to detention channels.

- A. Concrete Retaining Walls. These are detention facilities with vertical walls from the bottom up.
- B. Stone Walls. These may be of stacked boulders or placed dimension stone. They shall be designed to remain stable with water to the proposed full elevations, with appropriate slopes.
- C. Safety. The channels shall be fenced, walled, or bordered with landscaping or shrubs to limit pedestrian access.



Figure 14.524 Detention channel in urban setting

- D. Design. These may be designed for detention or retention, depending on soil conditions. On sloped sites, stepped channels permit several sequential levels of detention. They may be designed as dry basins or wet basins with a permanent pool. Capacity may be increased with connections to underground storage ([Section 14.527](#)).
- E. Bottoms. Where water flows through for extended distances, the bottoms shall resist erosion. A rock base of at least two feet in depth is preferable to concrete bottoms as it provides some retention. Also see water features ([Section 14.509](#)).

Section 14.525 Aeration

Wet detention of any type in this division involves a permanent pool of water. Aeration may be required to ensure water quality does not degrade during dry periods. Aeration may be achieved by use of pumped air, fountains, or waterfalls so as to suitably oxygenate the water for water quality or fish habitat as approved by the engineer.

Section 14.526 Waterfront Detention

This is a variant on detention to be used when development is adjacent to waterbodies. It provides detention and settlement of pollutants prior to releasing storm water to the waterbody from development on the shoreline (Figure 14.526A). A boardwalk is used to cover the chambers. A series of concrete detention chambers are constructed so pollutants can settle out prior to final release. Each chamber shall have a calibrated release so that as storm water enters, it displaces existing water. Storage capacity is that portion of each chamber above the existing waterbody (Figure 14.526B).



Figure 14.526A Detention for water front uses covered by a boardwalk

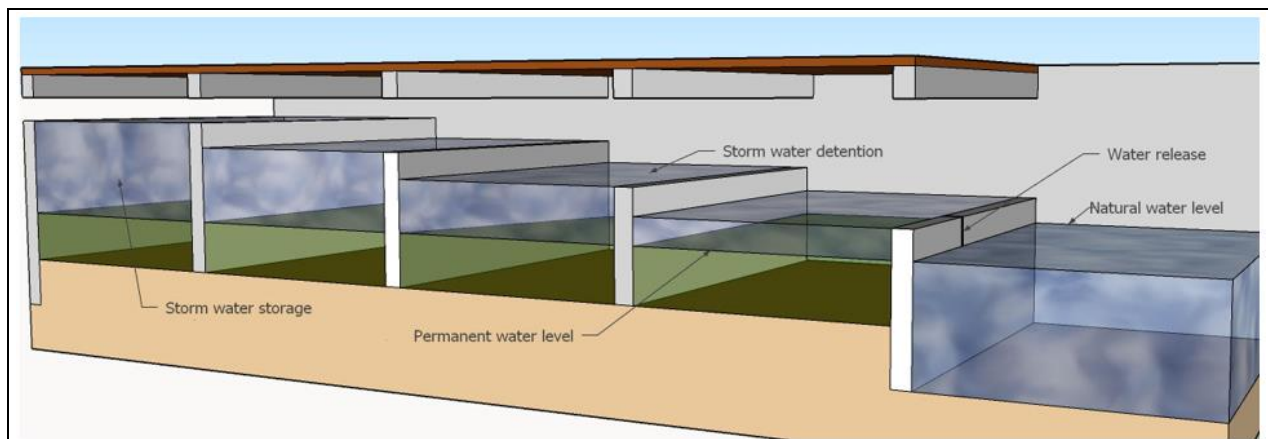


Figure 14.526B Section of waterfront detention cells

Section 14.527 Underground Detention

This is an urban technique that is best suited to areas with very high land costs. It places detention underground in vaults or pipes under parking, pedestrian, or lawn areas. In calculating the capacity, only 80 percent of the volume shall be counted in order to allow for sedimentation of the facility over time. Provision for cleaning of sediments shall be provided. The detention shall discharge to a drainage channel or storm sewer at a lower elevation.

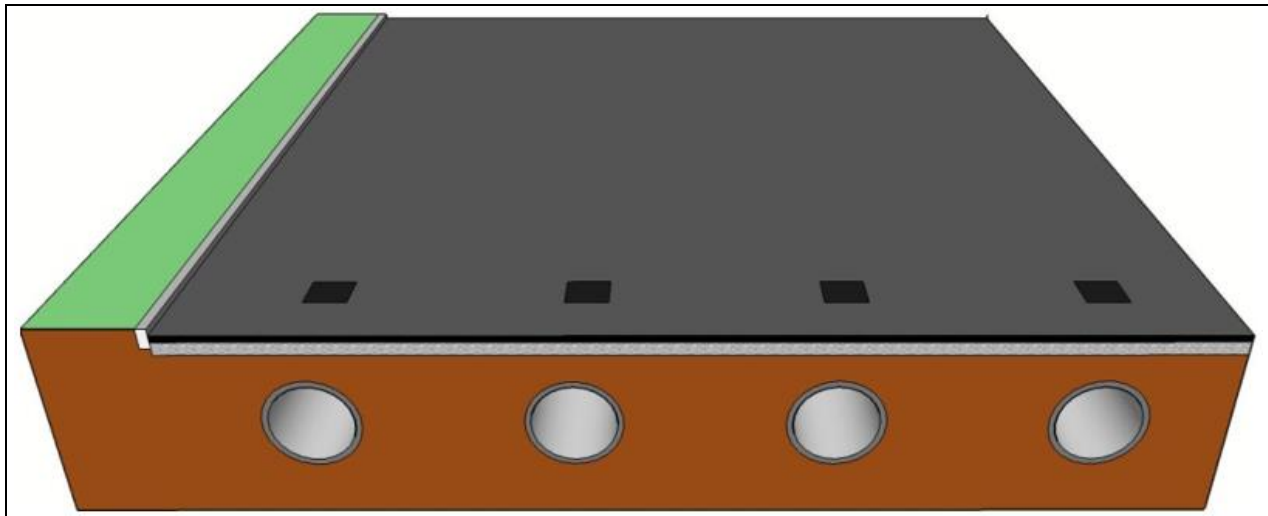


Figure 14.527 Storage under a parking lot

Section 14.528 Sidewalk Detention

Sidewalk detention takes two basic forms. The first is used in conjunction with tree planting areas (Figure 14.528A) that provide additional subsurface storage. The second uses inlets at the curb line, allowing storm water to reach subsurface storage (Figure 14.528B). Storage may be in gravel beds or pipes under the sidewalk. Curbs can be equipped with inlets that allow the storm water to enter the detention areas from street gutters as well as sidewalks. The sidewalk may be pervious or impervious pavement. Drains shall be installed to draw down the storage within 24 hours.



Figure 14.528A Detention with inlet at planter boxes

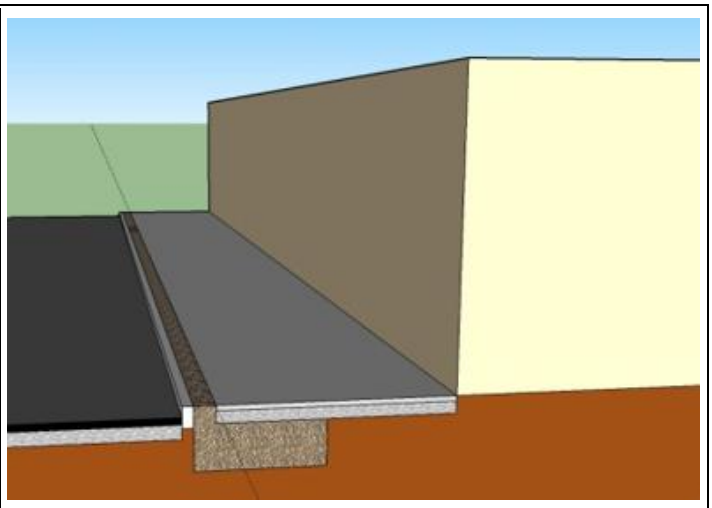


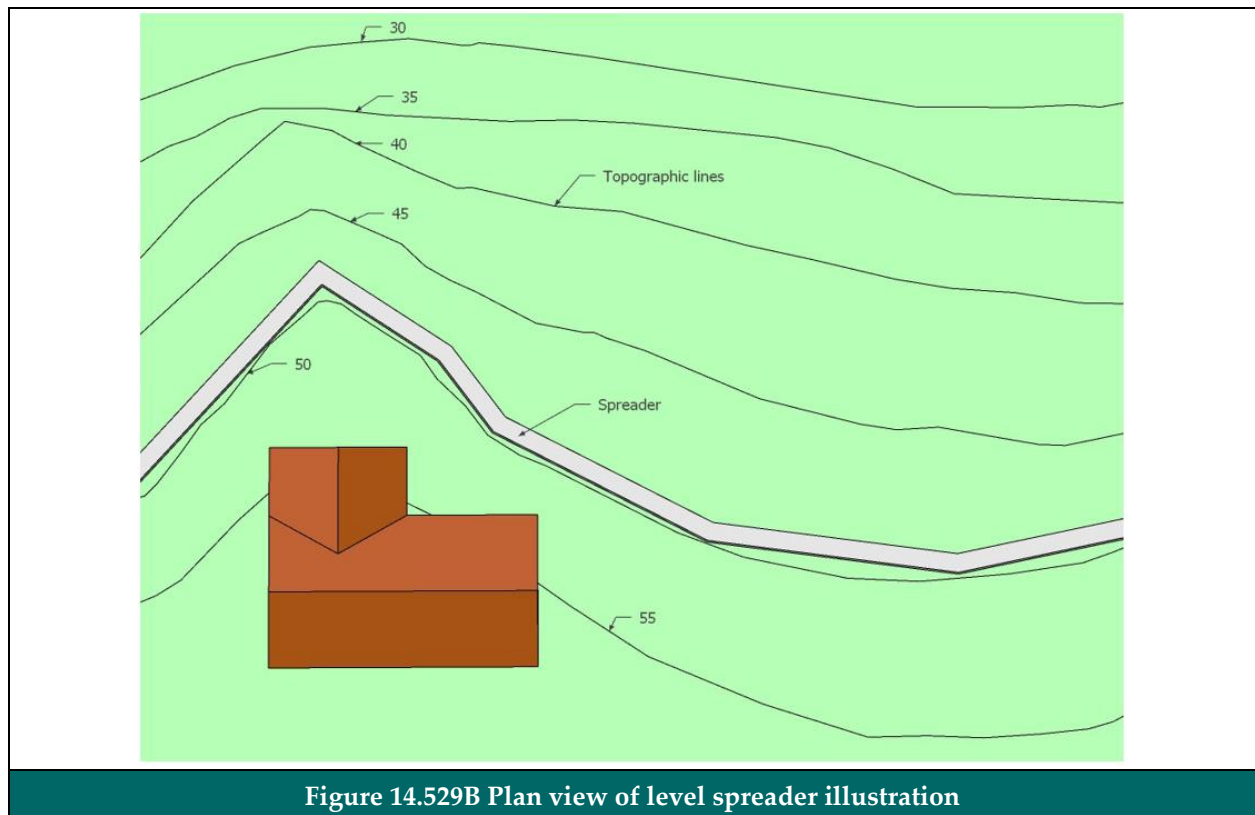
Figure 14.528B Continuous gravel inlet for water

Section 14.529 Level Spreaders

On small sites with slopes greater than 5 percent, level spreaders can reduce erosion by intercepting runoff that tends to concentrate into swales, resulting in erosion. They can release water in sheet flow, drain to rock swales or pipes. They can also be used to drain to a pipe that drains the water off the slope. They may be sections of pipe (Figure 14.529A) or rectangular in configuration. They shall be installed parallel to a topographic line at a fixed elevation. These are particularly desirable near a body of water to prevent sediments from washing into the waterbody. The design incorporates the following elements.

Figure 14.529A Cross section of a pipe-type level spreader

- A. Uphill Side. Storm water is introduced into the level spreader by downspouts, pipes, swales, or sheet flow.
- B. Layout. The spreader is installed at a fixed elevation (Figure 14.529B) parallel to the topography.



- C. Downhill Side. The area downhill shall be left in its existing vegetative cover.

Section 14.530 Lawn Preparation

Construction results in the compaction of soils around buildings that reduces the natural permeability of soils, increasing runoff. Tilling the lawn areas to a depth of 10 inches prior to planting restores some of the soil's ability to slow runoff. This changes the curve number used in runoff calculations.

Section 14.531 Inlet Treatment

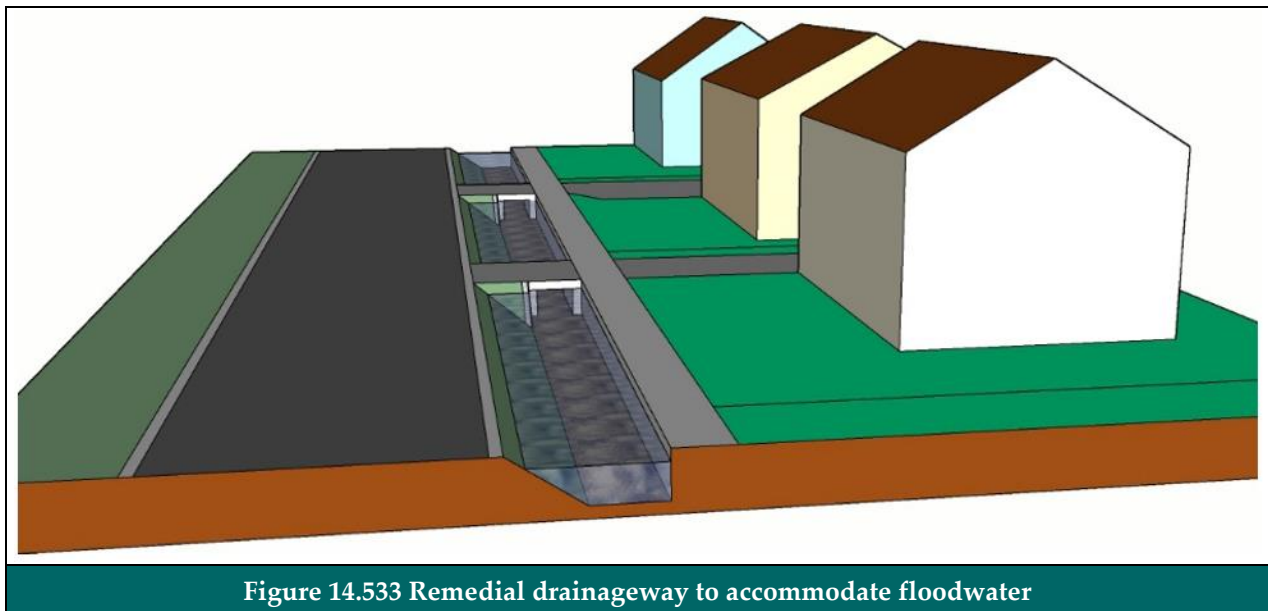
Devices shall be installed at inlets to storm sewers to trap solids and oils in order to prevent them from degrading storm water quality. The type of device shall be chosen from the jurisdiction's approved list. The jurisdiction shall approve their installation because they require regular maintenance.

Section 14.532 Street Sweeping

This involves regular sweeping of streets or parking areas to pick up solids that are deposited there so as to prevent them reaching the storm water conveyance system. Its effectiveness is dependent on frequency. It shall be required on pervious road surfaces in order to prevent clogging.

Section 14.533 Remedial Surface Drainage

This drainage is intended to reduce flooding where streets and yards flood because of inadequate storm sewers or due to backup from a waterbody (Figure 14.533). It involves a deep swale in the street right-of-way and in part of a front yard. It is designed to accommodate the storm water that would otherwise flood the street and front yard. This can be used in conjunction with de-channelization ([Section 14.514](#)).



DIVISION 14.600 OTHER INFRASTRUCTURE

Section 14.601 Purpose

This division addresses utilities that are provided by others, including electricity, gas, telephone, or cable. It controls the placement of and access to these facilities.

Section 14.602 Placement

Final engineering plans shall provide details of the placement of all other utilities. The jurisdiction shall approve the placement of any utilities in the public right-of-way of streets or alleys. The utilities shall have approved the placement proposals and shall sign off on any required changes.

Section 14.603 Easements

All utilities not in public rights-of-way shall be placed in easements. These easements shall have a minimum width of 10 feet, as required by the utility. Easements may be in front, side, or rear yards. Easements on side or rear property lines shall be equally split between both lots. They may be permitted with the approval of the planning director in open space where they do not reduce resource protection. The engineer shall review the placement to ensure there is no conflict with public water, sewer, or storm sewer lines, and spacing is in accordance with safety criteria.

Section 14.604 Undergrounding

All telephone, cable, and electric lines shall be underground in developments and along roads when newly installed. Electric up to 34.5 kV shall be undergrounded.

Section 14.605 Shared Placement

Where feasible, utilities shall be placed together in a single right-of-way, provided there is no safety concern. Telephone and cable lines shall be located together. Where there are subsurface vaults for utilities, the engineer shall approve their design in order to provide adequate spacing and minimize the number of subsurface vaults.

Section 14.606 Maintenance

Maintenance on public and private property differs.

- A. Private Property. The easements on private property shall be maintained as lawn and kept free of fences, structures, or landscaping, to permit access for maintenance. With the approval of the utility, canopy trees may be planted in the easement at least three feet from the lines, where access by vehicles is not required. Any fences, structures, or landscaping that are damaged by the utility in maintaining the utility lines will be the landowner's responsibility to clean up. The utility is only responsible for bringing the soil to grade and seeding the area disturbed with grass. Utilities are not responsible for any damage done to materials or equipment in the easement.
- B. Open Space. Where the planning director approves utility easements in open space, they shall be in lawn or open space designed to remain as grasslands. When maintenance is required, all access is limited to the easement. The land is to be restored to initial grade and lawn or natural grasslands.
- C. Right-of-Way. Restoration after work in the right-of-way, the area shall be restored to its preexisting condition and approved by the engineer. Where there are street trees in the right-of-way, the repair should be done using methods that do not damage the trees. Where this is unavoidable, the utility shall replace the damaged or destroyed trees with similar trees that meet the size standards of [Table 8.103](#).

ARTICLE 15 ADMINISTRATIVE BODIES

Contents:

DIVISION 15.100 PURPOSE

Section 15.101 Purpose

DIVISION 15.200 ELECTED OFFICIALS

Section 15.201 Elected Officials

DIVISION 15.300 ADMINISTRATIVE BOARDS AND COMMISSIONS

Section 15.301 General

Section 15.302 Planning Commission

Section 15.303 Planning Commission Membership

Section 15.304 Zoning Board of Appeals (ZBA)

Section 15.305 Zoning Board of Appeals Membership

Section 15.306 Zoning Board of Appeal Meetings

Section 15.307 Housing Agency

Section 15.308 Historic Commission

Section 15.309 Design Review Committee

Section 15.310 Conflict of Interest

Section 15.311 Removal

DIVISION 15.400 STAFF

Section 15.401 Staff

Section 15.402 Duties, Jurisdiction, and Authority

Section 15.403 Planning Director

Section 15.404 Zoning Administrator

Section 15.405 Plat Committee

DIVISION 15.100 PURPOSE

Section 15.101 Purpose

This article establishes the planning duties of the council and the boards they may appoint. It sets duties and membership of appointed boards and staff.

DIVISION 15.200 ELECTED OFFICIALS

Section 15.201 Elected Officials

The council shall have all powers conferred upon it by federal, state, and local law. With respect to development approval and amendments to this ordinance, the council retains and shall exercise the powers set out in this section.

- A. Approvals. The council shall hear and decide on the following applications after receiving all reports from the planning director, planning commission, and Zoning Board of Appeals (ZBA) and a public hearing is held, pursuant to this article.
1. Text amendments to this ordinance.
 2. Amendments to the official zoning map.

3. Conditional approvals.
- B. Hiring. The council shall hire the planning director and provide an annual budget to provide staff and materials needed for the administration of this ordinance.
- C. Appointments. The council shall appoint the members of the following boards and commissions.
 1. Planning commission.
 2. Zoning Board of Appeals.
 3. Hearing officer.
 4. Others as appropriate. Historic preservation commission, design review board, housing agency, or other.
- D. Appeals. The council shall decide beneficial use appeals, as provided in [Section 16.306](#), after receiving the hearing officer's report.
- E. Mayor. The mayor shall sign all plats and land development plans approved by the planning director prior to recording.
- F. Fees. The council shall adopt by resolution a fee schedule for processing applications, pursuant to this ordinance, set to cover the costs of review. The fee schedule shall be attached to this ordinance.

DIVISION 15.300 ADMINISTRATIVE BOARDS AND COMMISSIONS

Section 15.301 General

The roles and responsibilities regarding the development approvals that are required by this ordinance are set forth in this division. A body may have more than one responsibility, such as holding a public hearing in addition to decision-making.

Section 15.302 Planning Commission

The planning commission is the primary planning agency of the jurisdiction and has responsibilities for the following:

- A. Planning. The planning commission is responsible for hearing changes to the comprehensive plan, chapters therein, or special planning studies and recommending them to the council for approval.
- B. Land Development Regulations. The planning commission is responsible for holding annual reviews of the LDO and making recommendations on how to improve its implementation of the comprehensive plan. It shall make recommendations and hold public hearings on all zoning map amendments.

[The planning commission is better equipped to look at consistency with the comprehensive plan than the Zoning Board of Appeals.](#)

- C. Administration. The administrative duties of the planning commission include the following.
 1. Keep an accurate and complete record of all planning commission proceedings.
 2. Take responsibility for the custody and preservation of all papers and documents of the planning commission and the department of planning.
 3. Maintain a list of all persons having asked in writing for notification of all meetings and agenda.
 4. Prepare, publish, and distribute reports, ordinances, and other material relating to the activities authorized under this LDO.
 5. If necessary, establish advisory committees.
 6. Delegate limited powers to a committee composed of two or more members of the commission.
 7. Contract for special or temporary services and professional counsel with the approval of the governing body. Upon request, the prosecuting attorney, engineer, or any other employee may render assistance and service to a planning commission without compensation.

- D. Annual Report. Make an annual report to the council concerning the operation of the planning commission and the status of planning within its jurisdiction.

Section 15.303 Planning Commission Membership

The planning commission shall consist of seven members appointed by the council.

- A. Qualifications. In appointing these members, the council shall ensure they meet the following requirements.
1. All members of the planning commission must be residents of the jurisdiction for at least three years prior to appointment.
 2. Members shall be qualified by knowledge, experience, or interest in matters pertaining to the development of the jurisdiction.
 3. The members of the planning commission must fairly represent different areas of geography. Non-voting members shall include the engineer (transportation and utilities), health department, or others designated by the council.
 4. Members shall not be elected or appointed officials of the jurisdiction, but membership on county or regional planning commissions is encouraged.

[This language is for municipalities only.](#)

- B. Term and Vacancy. The members of the planning commission shall serve staggered four-year terms.
1. Members who are already seated as of the effective date of this ordinance shall serve until their terms are up.
 2. All new or reappointed members shall serve four-year terms.
 3. Vacancies shall be filled for the unexpired term and made in the same manner as original selections were made.
 4. Staggered appointments should have only one year with only one appointment.
- C. Compensation. All planning commission members shall serve without compensation but shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their official duties.
- D. Chairperson. At its first regular meeting each year, the planning commission shall elect from its members a chairperson and vice chairperson. The vice chairperson shall have the power and authority to act as chairperson of the planning commission during the absence or disability of the chairperson.
- E. Meetings. The planning commission shall meet at least once a month and give notice of meetings as required by [Section 16.207](#) and [16.208](#).
- F. Quorum and Decision. The planning commission must have a quorum to conduct a meeting. A majority of the members shall constitute a quorum. No action of the planning commission is official unless authorized by a majority of the members present at a regular or properly called special meeting.

Section. 15.304 Zoning Board of Appeals (ZBA)

The ZBA has the responsibility to hear, review, and determine the actions below.

- A. Ordinance Amendments. The ZBA shall hold hearings and make recommendations to the council on all amendments to the ordinance text.
- B. Appeals. The ZBA shall hear any appeal of an order, requirement, decision, or determination made by an administrative official charged with the enforcement, except beneficial use appeals. Beneficial use appeals shall be processed as provided in Sections [16.305–16.309](#). They may reverse, affirm, or modify the order, requirement, decision, or determination, and have all the powers and authority of the official from whom the appeal was taken.

- C. Conditional Uses. The ZBA shall hear and make recommendation to the council to approve, approve conditionally, or deny conditional use applications. The conditions in [ARTICLE 2](#) shall be part of any recommendation. It shall also meet the standards of [Section 16.402](#).
- D. Variances. The ZBA shall hear and grant, deny, or modify a variance to the zoning ordinance.
- E. Hearings. It shall conduct hearings in accordance with the provisions of [ARTICLE 16](#).
- F. Decisions. In any action (B, C, and D) above, the ZBA shall write findings of fact, clearly indicating all reasons for the decision and the evidence considered.
- G. Records. It shall keep minutes of its proceedings and an audio or video record of all the board's proceedings and official actions. The record shall include all exhibits presented, findings of fact, and the vote of members. Such records shall be public records and kept in a safe manner. At the applicant's request and expense, it may provide a transcript of the proceedings. Where the jurisdiction desires a transcript, at its expense, it shall make a copy for the applicant or others at the cost of reproduction.
- H. Access. The records shall be accessible within three working days of demand, for a period of three years.

Section 15.305 Zoning Board of Appeals Membership

The ZBA shall be comprised of five members to be appointed by the council. The members of the ZBA shall meet the following requirements.

- A. Qualifications. Members must be residents of the jurisdiction for at least three years preceding appointment. They must be qualified by knowledge and experience in matters pertaining to the development of the jurisdiction. At least one member shall be a licensed attorney.
- B. Other Offices. Members shall not hold any other elective or appointive office in the jurisdiction.
- C. Term and Vacancy. Board members serve staggered five-year terms that expire on the first of January.
 - 1. Members who are already seated as of the effective date of this ordinance shall serve until their term is up.
 - 2. All new or reappointed members shall serve five-year terms.
 - 3. Vacancies shall be filled for unexpired terms and made in the same manner as original selections were made.
- D. Alternate Members. The council shall appoint up to three additional members to serve as alternate members of the ZBA. The alternate members are required to fill in when members have conflicts of interest or will not be available. An alternate shall serve for the entire proceedings of any case that they serve. Alternate members shall meet the same eligibility requirements as regular members above. The term for an alternate member is five years.
- E. Chairperson. At its first regular meeting each year, the ZBA shall elect a chairperson and vice chairperson from its membership. The vice chairperson shall have the power and authority to act as chairperson during the absence or disability of the chairperson.
- F. Compensation. The members and alternate members of the ZBA shall serve without compensation but shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their official duties.

Section 15.306 Zoning Board of Appeal Meetings

The ZBA shall meet monthly or more often, depending on the workload. The following rules apply to all meetings.

- A. Quorum. Three members constitute a quorum.
- B. Action. No action other than adjournment or calling for a special meeting shall be taken without the presence of a majority of members who have heard the case in question. Adjournment or calling for a special meeting requires the presence of a majority of members.

- C. Meetings and Notice. The ZBA shall meet and give notice of meetings as required by [Section 16.207](#).
- D. Special Meetings. Special meetings may be called during a regular meeting for the purpose continuing the hearing. They may also be requested by two members of the ZBA with seven days' notice, to be sent to members, posted on the department website and office, and to all people who have requested notice of all meetings. At special meetings other than continuances, the only things discussed shall be the need for a meeting on a topic that is not currently scheduled for hearing or is being heard. The topic of the meeting shall be discussed and a decision made to add it to a subsequent meeting agenda.
- E. Rules of Order. The ZBA shall establish and follow rules of order. Failure to strictly follow rules of order shall not be grounds for appeal, provided that:
 - 1. All meetings on a case have been properly noticed.
 - 2. A member who has a conflict shall notify the chairman prior to the hearing so as to allow an alternate member to be appointed. No member who has a conflict of interest in a case shall sit on that case.
 - 3. All testimony shall be given under oath.
 - 4. All those testifying may be questioned by the board and are subject to cross-examination.
 - 5. Parties may be represented by an attorney.
 - 6. Where there are a large number of people testifying, the ZBA may require those giving duplicative testimony to shorten their comments to agreement or disagreement with prior testimony.
 - 7. The ZBA may require parties having similar interests to combine and have a spokesman to conduct cross-examination, if not represented by an attorney.
 - 8. The ZBA shall act in good faith. Failure to follow the rules of order shall be appealable only on procedural grounds. All decisions are appealable on other grounds and evidence shall be submitted.

Section 15.307 Housing Agency

The housing agency shall consist of five members appointed by the council. Its purpose is to run a program for housing in order to provide and manage subsidized and affordable housing in the jurisdiction. It shall identify the need for subsidized and affordable housing within the jurisdiction. The following conditions are required for membership.

- A. Qualifications. Members must be residents of the jurisdiction for at least three years preceding appointment. They must be qualified by knowledge and experience in matters pertaining to housing and housing management, and/or real estate. At least one member shall be a representative of low- and moderate-income residents in the jurisdiction.
- B. Other Offices. Members shall not hold any other elective or appointive office in the jurisdiction.
- C. Term and Vacancy. Board members serve staggered five-year terms that expire on the first of January.
 - 1. Members who are already seated as of the effective date of this ordinance shall serve until their term is up.
 - 2. All new or reappointed members shall serve five-year terms.
 - 3. Vacancies shall be filled for unexpired terms and made in the same manner as original selections were made.
- D. Chairperson. At its first regular meeting each year, the ZBA shall elect a chairperson and vice chairperson from its membership. The vice chairperson shall have the power and authority to act as chairperson during the absence or disability of the chairperson.
- E. Compensation. All historic commission members shall serve without compensation but shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their official duties.
- F. Agency Powers. The housing agency shall do the following:

1. Develop a plan to provide for providing low- and moderate-income housing in the jurisdiction.
2. Own and manage affordable and subsidized housing for the jurisdiction.
3. Secure grants to provide assistance in the building of affordable or subsidized housing.
4. Work with the planning director to review, approve, and manage affordable housing, pursuant to [DIVISION 6.200](#) of this ordinance. This includes the following:
 - a. Establish the income requirements for each unit based on its initial value and the annual income level necessary to afford it.
 - b. Prevent sales or rentals to unqualified buyers and renters.
 - c. Require owners or owners of rental property to maintain the properties in a sound condition that protects the health, safety, and welfare of the residents. Inspection is required before sale or new rentals.

Section 15.308 Historic Commission

The historic commission shall consist of five members appointed by the council. Its purpose is to identify historic buildings, sites, or landmarks within the jurisdiction that need protection. It shall assist landowners to obtain state or federal designations, if desired. When questions on the preservation of historical or landmark sites designated by the jurisdiction arise, the commission shall assist staff on matters covered by this ordinance.

- A. **Qualifications.** In appointing these members, the council shall ensure they meet the following requirements.
 1. Four members of the historic commission must be residents of the jurisdiction for at least three years prior to appointment. One member may be from a surrounding area if there is no one available within the jurisdiction who meets one of the requirements listed in 2 below.
 2. Qualified by knowledge, experience, or interest in history of the jurisdiction, one member shall be an architect or builder who understands structural preservation issues. One member shall be knowledgeable in real estate or finance. When a historic district or districts have been created, at least one member shall live within the historic district.
- B. **Term and Vacancy.** The members shall serve staggered five-year terms, expiring on the first of January.
 1. Members who are already seated as of the effective date of this ordinance shall serve until their term is up.
 2. All new or reappointed members shall serve five-year terms.
 3. Vacancies shall be filled for unexpired terms and made in the same manner as original selections were made.
- C. **Compensation.** All historic commission members shall serve without compensation but shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their official duties.
- D. **Chairperson.** At its first regular meeting each year, the ZBA shall elect a chairperson and vice chairperson from its membership. The vice chairperson shall have the power and authority to act as chairperson during the absence or disability of the chairperson.
- E. **Meetings and Notice.** The historic commission shall meet and give notice of meetings as required by [Section 16.207](#). The board shall meet at least once every two months or more frequently, as required, to review applications.
- F. **Quorum and Decision.** The historic commission must have a quorum to conduct a meeting. A majority of the members shall constitute a quorum. No action of the historic commission is official unless authorized by a majority of the members present at a regular or properly called special meeting.

- G. Designation of Sites. Upon formation, the historic commission shall prepare a list of buildings, sites, or other places for designation as historical or landmark sites by the jurisdiction and present it to the council for approval.
1. Prepare documentation of every proposed building or site that identifies its age, architectural value, role in historical events, cultural significance, and/or other matters that justify its inclusion in a historical district or as a historical site. This shall include photographs of each and its elevation and floor plans, if available.
 2. Meet with the landowners, if possible, to discuss the designation and landowner concerns.
 3. Hold a public hearing, pursuant to the requirements of this article, prior to making recommendations to the council.
- H. Review of Building Permits. Once a historic district is created, the historic commission shall meet to review building permits and plans for historic buildings in the district or plans for additions or new buildings. The commission's approval is required for the issuance of a building permit.

Section 15.309 Design Review Committee

The design review committee shall consist of five members appointed by the council. Its purpose is to conduct design reviews. It shall review large-scale developments that have more than 300,000 square feet and overlay districts that require design review, per [ARTICLE 1](#). In appointing members, the council shall ensure they meet the following requirements.

- A. Members of the design review committee should be residents of the jurisdiction for at least three years prior to appointment. However, where professionals in 1 below are too involved in local development, the council may appoint nonresidents.
1. At least three members shall be architects, landscape architects, urban designers, planners, or persons with degrees in design or design history.
 2. The remaining members shall show an interest in the jurisdiction's appearance and character.
- B. Term and Vacancy. The members shall serve staggered five-year terms that expire on the first of January.
1. Members who are already seated as of the effective date of this ordinance shall serve until their term is up.
 2. All new or reappointed members shall serve five-year terms.
 3. Vacancies shall be filled for unexpired terms and made in the same manner as original selections were made.
- C. Compensation. All design review committee members shall serve without compensation but shall be reimbursed for all reasonable and necessary expenses incurred in the performance of their official duties.
- D. Chairperson. At its first regular meeting each year, the ZBA shall elect a chairperson and vice chairperson from its membership. The vice chairperson shall have the power and authority to act as chairperson during the absence or disability of the chairperson.
- E. Meetings and Notice. The design review committee shall meet and give notice of meetings as required by [Section 16.207](#).
- F. Quorum and Decision. The design review committee must have a quorum to conduct a meeting. A majority of the members shall constitute a quorum. No action of the design review committee shall be official unless authorized by a majority of the members present at a regular or properly called special meeting.

Section 15.310 Conflict of Interest

When a member of a committee or board has a conflict of interest on a matter before the bodies in this article, he or she shall withdraw and not participate in any manner in the hearing or decision on that matter. A member has a conflict of interest when any of the following conditions are true.

- A. The member provides or has provided services to the applicant in a professional capacity on this or other developments.
- B. The member has a financial interest in the project or any of the applicant's projects.
- C. The member and applicant are business partners or common owners.
- D. The member has taken a position, spoken or written, about the proposed project, in advance of hearings.
- E. The member owns property within 300 feet of the proposed site, except for members of the historic commission.
- F. Voting with a conflict of interest is malfeasance.

Section 15.311 Removal

Members of the planning commission, ZBA, housing agency, historic commission, or design review committee may be removed by the council for inactivity (missing four consecutive meetings), neglect of duty, malfeasance, or moving out of the jurisdiction. Prior to removal, the person to be removed shall be provided with a written statement of the reasons for removal and an opportunity to be heard on the matter. Missing meetings for a conflict of interest shall not count. Illness shall not be considered inactivity until meetings have been missed for four consecutive months.

DIVISION 15.400 STAFF

Section 15.401 Staff

For the purposes of this ordinance, the departments of planning and zoning, public works, transportation, and health shall be considered staff in the administration of the LDO. Any other employees designated or employed by these departments shall constitute staff. This division identifies the duties and authority of staff and specific planning and zoning officials. The staff shall make recommendations to the council, planning commission, ZBA, historic commission, and design review committee.

Section 15.402 Duties, Jurisdiction, and Authority

Staff shall have the following jurisdiction, authority, and duties under this ordinance.

- A. Staffing. Staff duties include the following.
 - 1. Maintaining records, scheduling meetings, and keeping minutes or other records of all proceedings and meetings.
 - 2. Providing a staff member at all meetings.
 - 3. Providing written recommendations or studies to assist in their work.
- B. Applications. Staff shall review and determine the adequacy of any application in meeting the standards for the type of application to be processed. The review shall determine whether standards are met or not and make recommendations on design. If found inadequate, it shall be returned with written notice as to the inadequacy.
- C. Recommendations. Staff shall review the following types of applications and submit a written report and recommendations to the council, planning commission, and ZBA.
 - 1. Comprehensive plan.
 - 2. Zoning text amendments.
 - 3. Zoning map amendments.
 - 4. Conditional uses.

5. Variations.
 6. Beneficial use appeals.
- D. Decisions. The planning director, with advice from staff, shall make final decisions on subdivisions and land development, pattern book approval, modulations, and interpretations.

Section 15.403 Planning Director

The planning director is appointed by the council and manages the planning department. The director is responsible for all planning matters, the comprehensive plan, zoning, subdivision and land development, and other special studies.

- A. Approvals. The planning director grants approval of the following submissions.
1. Subdivision and land developments. After receiving recommendations from the departments of transportation, public works, and health, the planning director shall approve the projects if they meet standards and there is no disapproval from the other departments.
 2. Pattern books. The standards of [Section 16.510](#) must be met.
 3. Limited uses. The standards of [ARTICLE 2](#) must be met.
 4. Modulation. The standards of [ARTICLE 10](#) must be met.
 5. Interpretations. After receiving a report from the zoning administrator, the planning director may issue or modify the interpretation.
 6. TDR. Transferable development rights (TDR) must meet the standards of [ARTICLE 6](#).
 7. Forms. The planning director shall amend or revise application forms associated with the implementation of this ordinance.
- B. Recommendations. The planning director shall make recommendations on the following to decision-making bodies ([ARTICLE 16](#)).
1. Plan amendments.
 2. Zoning amendments.
 3. Conditional uses.
 4. Variances.
 5. Beneficial use appeals.
 6. Historic. Developments involving historic, scenic, or cultural sites.
 7. Design reviews.
 8. Conditional approval. Report to council on conditional approvals.
 9. Variances. Where there is a high percentage of variance approvals, the planning director shall recommend a change of the ordinance or recommend that the council direct the zoning board to cease such variance approvals as inconsistent with the ordinance.
- C. Records. The planning director shall assure all plats, development plans, and surety are recorded with the recorder of deeds office.
- D. Other Duties. All planning staff, including the zoning officer, report to the planning director. The planning director's other duties include the following.
1. Budget. Prepare and submit a budget for the operation of the planning department, planning commission, ZBA, and design review committee.
 2. Staff. Hire and supervise staff, including the zoning officer, within the approved budget.
 3. Support and planning. Within the approved budget, conduct any planning, zoning, or development studies needed to provide assistance to the department of planning, planning commission, ZBA, historic commission, and design review committee.

4. Coordination. Coordinate with the departments of public works, transportation, health department, and regional, state, or federal agencies regarding planning, subdivision, or land development matters pursuant to this LDO.

Section 15.404 Zoning Administrator

A member of the planning department staff shall be designated as zoning administrator by the planning director. The zoning administrator shall sign or direct to be signed all the documents in A below.

- A. Action of Zoning Administrator. The following are actions that must be taken by the zoning officer.
 1. Issue zoning certificates, per [Section 16.502](#).
 2. After inspection of the use, issue occupancy permits, per [Section 16.503](#).
 3. Submit draft interpretations of the LDO to the planning director.
 4. Maintain a file of all interpretations.
- B. Other Duties. The zoning administrator has the following additional responsibilities.
 1. Make recommendations on changes to the ordinance to the planning director.
 2. Annually prepare a report on all conditional uses, variations, and appeals heard by the ZBA to determine whether they met the standards for granting them ([DIVISION 16.400](#)) and whether they are consistent. The percentage granted, denied, and granted with conditions shall be reported. The report shall be made to the planning director, ZBA, and council. Propose changes to application forms used by this ordinance and landscape lists.

Section 15.405 Plat Committee

The plat committee's purpose is to provide a professional review of all subdivisions and land developments. A weekly regular meeting provides for reviewing and acting on proposed developments, so all agencies can share their input and discuss the project with the developer. The plat committee includes the planning director, zoning administrator, department of transportation, department of public works, and health department, if applicable. The committee holds regularly scheduled meetings that are open to applicants and the public. This meeting allows all interested parties to observe and participate in the approval process. The planning director is the decision-maker. The other department heads may delay a decision with an objection. If the department files a letter that outlines the failure of a project to meet specific standards, the planning director may not approve the project until the standard is met.

ARTICLE 16 PROCEDURES

DIVISION 16.100 PURPOSE

16.101 Purpose

This article establishes the procedures for all approvals, administrative reviews, and administrative relief required by this ordinance. It provides for the timetables for reviews, decision-making, and the standards for approval.

Section 16.102 Procedures

This ordinance is administered by various bodies, elected and appointed, as well as staff. In rendering decisions, the bodies and staff are required to follow the procedures and standards of this article. Division 16.200 addresses process and time limits on making decisions. Division 16.300 covers actions that provide legislators full discretion over zoning text amendments, map amendments, and beneficial use appeals. Division 16.400 covers quasi-judicial decisions, where there is limited discretion in making decisions based on facts and the record. All other decisions are administrative, where there is no discretion and where, if the use or action meets all standards of the ordinance, approval must be given.

DIVISION 16.200 PROCESS AND TIMING

Section 16.201 Purpose

The purpose of this section is to identify the procedures, process for making and reviewing applications, advertising, taking public comment at hearings, making decisions, and timing. All applicants must pay the required application fees to be heard. The following steps, where applicable, are listed in the tables of this division. Not all steps are involved in every procedure. Pre-application conferences are recommended but only required for large-scale subdivision or land development.

- A. Application Fee. A fee shall be paid when submitting an application.
- B. Completeness Review. There is a review period when staff determines that the application is full and complete, having all required drawings and information.
- C. Site Inspection. This provides for staff to visit the site to verify actual conditions on the site. The planning director may waive this where it is not required.
- D. Substantive Review. This review determines whether all the standards of the ordinance are met and, where necessary, makes recommendations for action or corrections.
- E. Public Notice. This refers to the public notice required prior to holding a public hearing (Section 16.207).
- F. Notice. The plat committee serves notice of the agenda for its meetings.
- G. Hearing. This is a meeting conducted as a public hearing, presenting the application and taking comments and testimony from the public and, when necessary, issuing any continuations.
- H. Public Meeting. This is a regularly scheduled public meeting where an application is discussed.
- I. Recommendation or Decision. This refers to the public meeting at which a decision or recommendation is made.
- J. Required. The column labeled Days in Tables 16.202A–F indicates the maximum number of days required for that step.

Section 16.202 Process Tables

This section sets forth steps, in Tables 16.202A–F, and indicates whether they are required for a procedure. It provides information on the time allotted for each step and the decision-maker or recommending body at each step.

- A. Comprehensive Plan Amendments and Street Vacations. These are planning actions that are discretionary and made by the council, with recommendations from the planning director and planning commission (Table 16.202A). Vacation covers the transfer of title to streets or other public land to neighbors due to vacation of the plat that created it.

Table 16.202A Comprehensive Plans, Vacations				
Steps	Comprehensive Plans		Vacation	
	Days	Agency	Days	Agency
Completeness Review	3	Staff	3	Staff
Site Inspection	10	No inspection is required as staff will be familiar	10	Staff
Application Review, Substantive	15	Staff	15	Staff
Notice	15–30	Planning Director	15–30	Planning Director
Public Meetings	30	Planning Commission	30	Planning Commission
Recommendation	30	Planning Commission	30	Planning Commission
Notice	15–30	Planning Director	15–30	Planning Director
Hearing	30	Council	30	Council
Decision	30	Council	30	Council

- B. Zoning Changes and Beneficial Uses. These are both discretionary zoning actions, with the final decision made by the council (Table 16.202B). Zoning text changes require recommendations from the planning director and Zoning Board of Appeals (ZBA). Zoning map amendments require the recommendation of the planning director and planning commission. Beneficial uses involve hearings held by a hearing officer who makes a recommendation to council.
- C. Conditional Uses, Mitigation of Nonconforming Uses, and Variances. These are quasi-judicial decisions made by the ZBA (Table 16.202C). The discretion in quasi-judicial decisions is limited to determining whether the approval criteria are met and weighing the merit of competing testimony.

Table 16.202B Zoning Changes and Beneficial Uses				
Steps	Zoning Map or Text Amendments		Beneficial Use	
Steps	Days	Agency	Days	Agency
Pre-Application Conference	10	Staff	10	Staff
Completeness Review	3	Staff	3	Staff
Site Inspection	10	Staff	10	Staff
Application Review, Substantive	15	Staff	30	Staff
Notice	15-30	Zoning Officer	15-30	Zoning Officer
Hearing	62	*		Hearing Officer
Recommendation	30			Hearing Officer
Notice	15-30	Zoning Officer	15-30	15-30
Hearing	62	Council	31	Council
Decision	62	Council	31	Council
*Hearings and recommendations for zoning text are made by ZBA and map amendments by planning commission.				

- D. Interpretations. Interpretations are a ministerial action of the planning director. Appeals are quasi-judicial decisions made by the ZBA. Table 16.202D shows the process.
- E. Subdivisions, land development plans, and pattern books, are ministerial acts of the planning director and the plat committee (Table 16.202E). The decisions are ministerial, as they allow no discretion beyond site plan adjustments that follow the review standards. Design changes shall not result in the prohibition of a permitted use or the lowering of the permitted intensity. The design review committee may be involved in the review of pattern books, at the planning director's discretion. Pattern book reviews are simultaneous with the subdivision or land development approval and do not have a separate timeline.

Table 16.202C Conditional, Mitigation, and Variances				
Steps	Conditional Use and Mitigation of Nonconforming Uses		Variance	
Steps	Days	Agency	Days	Agency
Pre-Application Conference	10	Staff	10*	Staff
Completeness Review	3	Staff	3	Staff
Site Inspection	10	Staff	5	Staff
Application Review, Substantive	15	Staff	10	Staff
Notice	15-30	Zoning Officer	15-30	Zoning Officer
Hearing	62	ZBA	62	ZBA
Decision	31	ZBA	15	ZBA

*Optional for variances

Table 16.202D Interpretations and Appeals				
Steps	Interpretation		Appeal	
Steps	Days	Agency	Days	Agency
Completeness Review	3	Staff	3	Staff
Site Inspection	3	Staff	5	Staff
Application Review, Substantive	5	Staff	10	Staff
Notice	None	Zoning Officer	15–30	Zoning Officer
Hearing	No hearing is required		31	ZBA
Decision	5	Planning Director	31	ZBA

- F. Limited Use, Zoning Certificates, Occupancy Permits and Sign Permits. These are ministerial decisions made by staff with no discretion, approved if standards are met, denied when not. The limited use decision is part of a subdivision, land development, or building permit application. Occupancy permits are issued after finishing construction, to determine if built to ordinance and plan.

Table 16.202E Subdivision, Land Development, and Pattern Book				
	Subdivisions or Land Developments		Pattern Book	
Steps	Days	Agency	Days	Agency
Pre-Application Conference	10*	Staff	10	Staff
Completeness Review	3	Staff	4	Staff
Site Inspection	10	Staff	10	Staff
Application Review, Substantive	15	Staff	15	Staff
Notice	Letter	Planning Director	Letter	Planning Director
Public Meeting	15	Plat Committee	15	Design Review Committee
Decision	10	Planning Director	10	Planning Director
*Pre-application conferences are suggested but not required for minor subdivisions or land development.				

Table 16.202F Limited Use, Zoning, or Sign Permits				
	Limited Use		Zoning Certificates, Occupancy Permits, or Sign Permits	
Steps	Days	Agency	Days	Agency
Completeness Review	3	Staff	NA	
Site Inspection	5	Staff	5	Zoning Officer
Application Review, Substantive	15	Staff	15	Zoning Officer

Decision	10	Planning Director	5	Zoning Officer
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Section 16.203 Pre-Application Conference

A pre-application conference is mandatory only for major subdivision and land development applications but is advised for applicants making a first application in the jurisdiction. The purpose is to familiarize the applicant with the ordinance requirements. It also provides staff with an opportunity to identify any of the jurisdiction's concerns prior to the applicant making a substantial investment in plans and engineering. The following standards control the pre-application conference.

- A. Initiation. An applicant shall request a date for the pre-application conference with staff. The request shall be accompanied by a description of the purpose and type of the application and, where appropriate, the character, location, and magnitude of the proposed development approval sought. A concept plan for subdivisions, land developments, and pattern book applications shall accompany the request for the pre-application conference.
- B. Scheduling. Upon receipt of the request for a pre-application conference, the zoning administrator shall schedule and hold the conference. The zoning administrator shall notify the applicant and plat committee of the time, date, and place of the conference.
- C. Conference Determinations. At the pre-application conference, the plat committee shall review the material, make recommendations, and indicate concerns, problems, or other factors the applicant should consider in pursuing the proposal. They shall answer any questions from the applicant.
- D. Written Summary. The staff shall mail to the applicant a written summary of the pre-application conference within the time indicated in Tables 16.202A–F.

Section 16.204 Applications

Unless otherwise indicated in this article, applications shall be submitted by the owner, any other person having a contractual interest in the land for which the use is proposed, or an authorized agent. The exception is staff-initiated ordinance or comprehensive plan amendments.

- A. Application. The application shall be submitted in or on a form established by jurisdiction. The application form contains all the information each application must provide to be considered complete. All applications shall provide mailing address, email, and phone numbers at which the applicant may be contacted. Unless specified by the applicant, the staff shall communicate by email.
- B. Submission. An application shall be submitted to the zoning administrator. Applications received before 2 p.m. shall be dated the same working day. Applications received after that time shall be dated the next working day.
- C. Inspection and Access. Accompanying any application for a permit, design review, or other administrative actions shall be a signed statement granting staff or other bodies the right of reasonable access to view, enter, and inspect the property, on-site uses, or buildings for compliance with this ordinance.
- D. Fee. The applications shall be accompanied by the fee required in the fee schedule available from the planning department or zoning officer.

Section 16.205 Completeness Review

The zoning administrator or planning staff shall determine, within the time specified in Tables 16.202A–F, if the application contains all information, drawings, or calculations or other required material on the

application forms. This determination only indicates material on the required topic is present, not whether it meets ordinance standards. The zoning administrator shall notify the applicant in writing after the review whether it is complete or incomplete. If it is determined the application is incomplete, a written notice shall be mailed to the applicant, specifying missing material. The application fee shall be retained and the application redated upon resubmission. The fee shall be returned upon the applicant's request. If it is complete, the zoning officer begins the requisite reviews by forwarding the material to the plat committee or other staff, as appropriate. It shall also be sent to the recommending and decision-making body as well as school, utility, public safety, and any state agencies, as required.

Section 16.206 Substantive Application Review

Upon receiving a complete application, staff or the plat committee shall begin the review. They shall review the comments on the plan or application and get comments from other departments or agencies. The applicant shall be given notice as to when the plat committee or staff will review subdivisions or land developments, so the applicant can participate. The following rules apply to the three types of applications.

- A. Subdivisions and Land Development. After the plat committee meeting, the planning director shall approve the plan, approve the plan with conditions, continue the review, or deny it if the plan fails to meet standards. A written report on the decision shall be sent to the applicant. The report shall identify any recommended changes or, if denied, the actions to correct these failures.
- B. Public Hearing Required. The report recommendation shall be sent to the applicant and made available to the public prior to the hearing. The zoning officer shall set the date for a public hearing, if such is required.
- C. All Other Reviews. The planning director shall, in writing, inform the applicant of the action taken on the application.

{Sidebar}

This ordinance is written with a single notice requirement for any public hearing. Check state statutes, as some have different notice requirements for different actions.

{/Sidebar}

Section 16.207 Public Notice

Prior to holding any public hearing, as required by Section 16.202, notice shall be given. Notice shall consist of an advertisement in a newspaper of general circulation in the jurisdiction. In addition, such notice shall appear on the jurisdiction's web site, and be emailed to all those who, in writing, have requested notice of meetings and agenda. Notice shall appear twice, no more than 30 and no less than 15 calendar days prior to the public hearing date. Where papers are not published daily, the nearest publication dates meeting these requirements are permitted. All notices shall contain the following information.

- A. Application. The notice shall include the type of application sought.
- B. Description. The notice shall include a short description of the proposed action or development requested.
- C. Legal Description. The notice shall include the legal description of the parcel and the street address or approximate location, where no address is available.
- D. Applicant. The name of the person seeking the application and his or her address, phone, and email shall be included.

- E. Hearing. The notice shall include the location, address, date, and time of the public hearing, as provided by the hearing officer (Section 16.206).
- F. Queries. The notice shall include information on where full details of the application may be obtained, including the location, office hours, and phone number.
- G. Responsibility. The applicant shall be responsible for providing the zoning administrator with the notice at least two working days prior to placement with the newspaper and posting on the property.
- H. Posted Notice. The zoning administrator shall post a public hearing notice sign on all subject properties at least 15 calendar days in advance of the public hearing, as follows:
 - 1. One sign shall be placed on the parcel for which the application was filed. The zoning administrator shall determine the number of additional signs to be placed on the parcel necessary to carry out this ordinance's intent.
 - 2. Signs shall be no less than two feet by three feet, contain information as illustrated in Figure 16.207G, posted by the zoning office, and a picture taken.
 - 3. The signs shall be set back no more than five feet from the street right-of-way. They shall be placed in a conspicuous location, clearly visible to the traveled portion of the respective street. Where the land does not have frontage on a public street, an additional sign shall be erected on the nearest street right-of-way with an attached notation, indicating the direction and distance to the land subject to the application.
 - 4. The signs shall be removed after the close of the hearing on the application.
 - 5. The failure of any such posted notice to remain in place after the notice has been posted shall not be deemed a failure to comply with the standards or be grounds to challenge the validity of any decision made on the application. However, any person, firm, association, or corporation, who shall remove, mar, scratch, obliterate, or in any manner deface, hide from view, or tamper with such signs shall be deemed in violation of this ordinance and the attorney shall take this to the court.



Figure 16.207G On-site sign information required

- 6. Comprehensive amendments to the comprehensive plan or zoning ordinance and text amendments to zoning shall be exempt from the posted notice requirement.

Section 16.208 Notice for Subdivisions or Land Developments

Notice in writing shall be provided to applicants for subdivisions or land developments as to when their application will be discussed by the plat committee. It also provides for people who have signed up with the planning department to receive email notifications of the meeting agenda of the plat committee.

Section 16.209 Public Meeting

Actions of the planning commission, council, and plat committee that do not require a public hearing shall be conducted at regular or special public meetings of that body. Such actions are all ministerial in nature and, thus, subject only to whether the proposal meets the requirements of this ordinance. The public meetings shall follow the rules of that body as established by that body, pursuant to Division 15.200. All proposals shall be heard during that portion of the agenda for such actions. The following actions shall be required during that portion of the agenda.

- A. Applicant Presentation. The applicant may present any information he or she deems appropriate.
- B. Staff Presentation. The staff shall present a written report which includes a narrative and/or graphic description of the application and a recommendation that addresses each factor required by this ordinance to be considered prior to application approval
- C. Public Comment. Any public comments may be heard but shall be limited to those concerning a failure to meet ordinance standards or studies on impacts.
- D. Continuance. The body conducting the public meeting may, on its own motion, continue application decision to the next regular or special meeting, indicating the date, time, and place of such meeting. An applicant shall have the right to request and be granted one continuance.
- E. Withdrawal of Application. An applicant shall have the right to withdraw an application at any time prior to the decision-making body's action on the application. All application fees shall be forfeited.

Section 16.209 Public Hearing Schedule

Where required in Section 16.202, a public hearing shall be scheduled by the zoning office for the first available regularly scheduled meeting of the hearing body. The jurisdiction shall ensure that sufficient meetings are scheduled so as not to delay the timelines. At least 10 days prior to the start of the public hearing, the zoning officer shall make copies of the staff reports available to the public. The following conditions shall apply to obtaining documents.

- A. Examination. Upon request during normal business hours, any person may examine any application and materials concerning the application and staff reports.
- B. Copying. A copy of such material may be obtained by any person upon applying to the zoning administrator and paying the duplication cost of such material.
- C. Further Notice. Requests for email or mail notification of any continued hearing dates will be accepted in writing by the zoning administrator, who shall be responsible for such notification. For those wanting mail notification, a fee shall be paid.

Section 16.210 Conduct of Public Hearing

The public hearing shall be conducted in the following manner.

- A. Rights of All Persons. Any person may appear at a public hearing and submit evidence.
- B. Organizations. Organizations or groups may be represented by an attorney or other individual. The chairperson may request written evidence of that person's authority to speak on behalf of the organization on the matter under consideration.
- C. Identification. Each person who appears at a public hearing shall state his or her name and address, and, if appearing on behalf of an organization, state the organization's name and mailing address.
- D. Order. The chairperson or staff shall open the hearing by identifying the hearing case number or other means of identification and indicate that public notice has been duly given. The meeting will be opened and will proceed as follows.
 - 1. The applicant shall present any information he or she deems appropriate.

2. The planning director or designated representative shall present a written staff report which includes a narrative and/or graphic description of the application and a recommendation that addresses each factor required by this ordinance to be considered prior to application approval. A verbal response to any statement made by the applicant at the hearing shall also be made at this time.
3. Public Testimony. The public shall be called to testify. At the chairperson's discretion, this testimony may be divided into questions from proponents and opponents, and statements. The chairperson may exclude testimony or evidence that is found to be irrelevant, immaterial, or unduly repetitious. At the conclusion of public testimony, staff shall be given the opportunity to comment on public concerns.
4. Excluded Testimony. In the event any testimony or evidence is excluded as irrelevant or immaterial, the person offering such testimony or evidence shall have an opportunity to make a proffer of such testimony or evidence for the record. Such proffer shall be made at the public hearing.
5. Closing. The chairperson shall close or, if unfinished, continue the public hearing. Upon closing the hearing, the chairperson may call for a decision or establish a date for a decision meeting.
- E. Continuance of Public Hearing. The body conducting the public hearing shall, on its own motion, continue the public hearing to a fixed date, time, and place. An applicant shall have the right to request and be granted one continuance. Any subsequent continuances requested by any party shall be granted at the discretion of the body conducting the public hearing only upon demonstrating good cause.
- F. Withdrawal of Application. An applicant shall have the right to withdraw an application at any time prior to the decision-making body's action on the application. All application fees shall be forfeited.
- G. Record. The body conducting the public hearing shall record the public hearing by tape. An applicant may request a court recorder prepare a transcript of the hearing at his or her own expense. The written or taped record of oral proceedings shall be retained as a permanent record. The minutes of the secretary shall be part of the record. All applications, exhibits, and papers submitted in any proceeding before the decision-making body and the staff report shall become part of the record. Lastly, the decision of the decision-making body and a recording of that meeting shall be part of the record. A copy of the public hearing record may be obtained by any person upon applying to the zoning administrator and paying the duplication cost of the record.

Section 16.211 Cross-Examination

At any public hearing, witnesses or persons testifying may be asked questions by the members of the body conducting the hearing. The applicant or his or her attorney shall be granted the right to cross-examine staff or public witnesses. Organizations or groups may also have rights to cross-examine via an attorney or spokesperson.

Section 16.212 Decision

After the hearing is closed, decisions shall be made at that or a subsequent public meeting. The following factors govern the decision.

- A. Timing. The decision shall be made within the time limits of Section 16.202, unless the applicant requests and is granted a continuance.
- B. Written Decision. All decisions or recommendations shall be made in writing and include the following:

1. A clear statement of specific findings of fact and a statement of the basis upon which such facts were determined, with specific reference to this ordinance's relevant standards and specific testimony.
2. A clear statement is provided as to whether the application is approved or disapproved. If approved with conditions, they shall be clearly spelled out or shown in drawings.
3. Any other information deemed necessary by the decision-making body.

Section 16.213 Record

The decisions of staff or a decision-making body shall be public records, open for inspection at the offices of the planning department during normal business hours, upon reasonable notice. A copy of the public hearing record may be obtained by any person upon applying to the planning department and paying the duplication cost of the record.

Section 16.214 Effect of Approval

Approving any application shall be deemed to authorize only the use, plan, or other specific activity for which the application was issued. Any conditions of approval must be met. Approvals shall run with the land except for zoning text changes and use interpretations, which are universal in application and shall be applied in all subsequent application reviews.

Section 16.215 Time Limitations

Time limitations are imposed on approvals because the jurisdiction desires approved plans to be built in a timely manner. It is undesirable that land be tied up by old plan approvals, leaving undeveloped land tied to old plans, and desirable that land be available for development without limitations. The time limits are listed in Table 16.215. Where subdivisions or land developments are submitted in phases, the time limits are for each phase. The following factors control developments with time limitations.

Table 16.215 Time Limits and Extensions		
Use	Time Limitation (months)	Extension (months)
Conditional Uses	12 ¹	6
Sign Permit	6 ²	3
Zoning Permit	12	6
Concept or Preliminary Subdivision or Land Development Plans	24	12
Final Subdivision or Land Development Plans	36 ¹	18
Pattern Book	36 ¹	18
¹ Unless specified otherwise in the conditional approval		
² If part of a zoning permit or site plan, 12 months		

- A. Notice. The approvals with time limits shall have a specific written notice on the approval, as follows:
 “This approval will expire on {Insert} (date of expiration) {/Insert} if the landowner or developer has failed to act on the approval.” For subdivisions and land developments, the plat shall read “valid to (expiration date).” After the expiration date, the jurisdiction shall vacate the plat, per Section 16.406.
- B. Failure to Act. The following conditions constitute failure to act.
1. No building permit has been issued to construct, build, or establish the use authorized in the approval.
 2. For concept or preliminary approvals, no final plat or land development plan has been filed by the developer.
 3. Approved subdivisions or land developments have no significant construction of the roads and utilities called for in the plans by the expiration of the time limit. OR
 4. Where work on streets and utilities has begun, but no work has been done for 12 months prior the expiration of the surety, the planning director and engineer shall determine whether it is better to call bond to complete the work or so little work has been done that vacating the plat is the best option.
- C. Extensions. Upon written request, a one-time extension may be granted by the decision-making body for a period not to exceed that shown in Table 16.215 where there is a good cause for not proceeding. The extension time limit may be extended for subdivisions and land developments where the planning director finds that a recession exists that has adversely impacted construction. No request for an extension shall be considered unless a written application requesting the extension is submitted to the zoning administrator no less than one month prior to expiration. Failure to submit an application for an extension within the time limits established by this section shall result in the approval's expiration, as provided above.

DIVISION 16.300 DISCRETIONARY REVIEWS

Section 16.301 Discretionary Reviews

This division provides for discretionary reviews in which the applicant must meet all applicable standards, but in which the decision-making body retains discretion and ultimate power to make decisions.

Section 16.302 Comprehensive Plan Amendments

The comprehensive plan should be updated every five years, or as required for new plan elements, neighborhood, corridor plans, or annexation. The community character designations of the comprehensive plan should mean that districts are not frequently amended. For the sub-urban and urban districts, changes are not required to permit a use, as nearly all are permitted in all these districts. Community character changes should be rare, except in the case of redevelopment. Changes should promote a more sustainable community, and the following standards apply.

- A. Location. The proposed amendment shall be contiguous with the proposed district for which a change is requested.
- B. Area. The cumulative reduction the area of changes to a community character district shall not be more than 15 percent, except as in C below.
- C. Transit. Changes to U, UM, or UC districts in response to new transit stops or lines redevelopment at existing transit stops need not meet the standards of A or B.
- D. Use Districts. Changes of use districts to other use districts or to a community character district may be approved if it can be demonstrated that conditions for development of such districts has changed.
- E. Lack of Development. Where it has been shown that the growth projections in the current plan have not been met over a period of 10 years, and the area proposed for a zoning change is over 80 percent vacant, a change may be approved. This section does not apply to land in the N, AG, or CS districts.

Section 16.303 Zoning Map Amendments

This section provides a means for changing the zoning map boundaries. Staff, the owners of the land, or others authorized by them in writing, may submit application for a zoning map amendment. Applications shall be on forms available from the planning department. Map amendments shall be consistent with the comprehensive plan, except when a mistake is found where the zoning was not consistent with the comprehensive plan, or where there is evidence that the original designation was an error and was inconsistent with surrounding zoning.

Section 16.304 Zoning Text Amendments

Amendments to the text of the zoning ordinance are intended to correct problems with the existing text, provide new districts, address a new issue, or otherwise make the ordinance better respond to the jurisdiction's needs. In making amendments, care must be taken not to create conflicts with existing provisions and to ensure the amendment addresses all applicable sections in order to avoid unclear or conflicting regulations. In general, text amendments are made by staff or at the direction of the planning commission or counsel. Individuals or groups may submit text amendments.

Section 16.305 Beneficial Use Appeal

Landowners may apply for a beneficial use appeal when they believe that all beneficial use of the property has been denied or "taken" due to the application of the standards of this ordinance. This application shall be required prior to going to the courts to provide the council the opportunity to provide relief by modifying the provisions with respect to that property or amending the ordinance.

- A. Purpose. It is the purpose and intent of this ordinance to provide all landowners with a beneficial use of their land. This is the only method of addressing such an allegation; use of the variance procedure (Section 16.403) is not allowed. The procedures listed in Sections 16.306–16.309 are designed to allow landowners to present their case that the ordinance, as applied to their property, has deprived them of all beneficial use and to request that the jurisdiction evaluate that allegation and provide tailored relief that provides for a beneficial use, should it agree.
- B. Special Application Data. The nature of this appeal is such that the following information is required to determine the value of the property, with and without the regulations.
 - 1. Documentation of the purchase date and price of the property at time of acquisition.
 - 2. A description of the property's current use.
 - 3. A site capacity calculation (Division 3.200) for the zoning district in which it is located. This shall include data on all physical features, as determined by an on-site inspection.
 - 4. A site plan showing what is allowed under the ordinance that allegedly provides no beneficial use.
 - 5. Identify sections of the regulations which allegedly eliminate all beneficial use of the property, together with all appraisals, studies, any other supporting evidence, and any actions taken by the jurisdiction related to the property.
 - 6. A description and sketch plans of the use which the landowner believes represents the property's minimum beneficial use, and all documentation, studies, and other evidence supporting that position.
 - 7. Documentation that the property has been listed for sale for at least 12 months prior to filing of the appeal, and originals or copies of all bids, offers to purchase, and other correspondence relating to the potential sale of such property.

Section 16.306 Jurisdiction Response

The jurisdiction's planning department shall, within 30 days, present the following response to the application.

- A. Site Plan. It shall confirm or correct what can be built under the current regulations as submitted in 16.305B4 above.
- B. It shall indicate the property value prior to the adoption of the current regulation based on assessed value or sales of properties with similar zoning and site conditions.
- C. Opposing Facts. It shall present any evidence contradicting information provided by the applicant, as required in Section 16.305.
- D. Beneficial Use. It shall present plans showing what the planning department staff considers a beneficial use, if different from the site plan submitted by the applicant.

Section 16.307 Hearing Officer

There shall be a hearing conducted by a hearing officer, following quasi-judicial rules of procedure. The hearing officer shall take testimony by both the applicant and the jurisdiction.

- A. Unless another party can demonstrate in a preliminary hearing that their property values would be damaged, no other parties shall be permitted to participate or give testimony. Both the applicant and the jurisdiction may make presentations at the preliminary hearing.

- B. After the hearing, the hearing officer shall prepare findings of fact on whether the standards for deprivation of use in Section 16.308 have been met.
- C. The hearing officer shall send the findings to the council, along with recommendations as to whether the council should grant any relief to the landowner.

Section 16.308 Deprivation Standards

In determining if a landowner has been deprived of beneficial use of property, the hearing officer shall rule on the application using the following factors.

- A. Diminution in Value. The property value prior to this ordinance's adoption shall be compared to the property value with the regulations as applied. A mere diminution in value does not deprive the landowner of a beneficial use. The diminution must be so drastic that it effectively deprives the landowner of any significant beneficial use or enjoyment of the property.
- B. Common Land Uses. Uses that are common to the jurisdiction and/or the area of the subject site shall be considered common uses where they still provide for occupation and living by the landowner. It is not necessary for common uses to involve further development of the land. Such common uses shall be considered beneficial uses unless it can be shown that such uses on the property in question are not a viable option, due to size or other special conditions of the site that restrict its ability to provide for occupation by the landowner.
- C. Unique Treatment. It shall be determined if the property is being singled out for different treatment than similarly situated properties under this ordinance.
- D. Subsidy. Determine if there are any jurisdiction or other government program that have made payments for on-site improvements, special tax benefits, or pays to support current uses or future uses. If the regulation protects the property from possible loss of property or life, the costs of emergency assistance, if such damages occur, shall be accounted for. Where such a subsidy exists, its monetary value shall be determined and should be reflected in the considered minimum beneficial use, in addition to development value.
- E. Buildability. If there are physical limitations on a site that would require site improvement or building design that has significantly higher than average land development or building costs, these shall not be used to inflate the value of a proposed use.
- F. Adverse Impacts. Threats to the safety or health of present and future residents shall be monetized and that value added to the value under the ordinance.
- G. Expectations. Expectations shall, in general, not be considered. Only expectations backed by investments, other than those covering land and normal planning costs, and made prior to the adoption date of the regulations in question shall be considered.
- H. Nuisances. It shall be determined if the proposed use creates a nuisance and whether there are permitted uses that do not constitute a nuisance and can provide equal value.
- I. Minimum Increase. The minimum increase in use, intensity, and/or other ordinance limitations, if any, that would permit a beneficial use of the land, shall be determined. This test is not about the highest and best use but determining the minimum change in regulations needed to improve the value of the property to a level that is beneficial to the property owner.

Section 16.309 Granting Relief

The council shall make the ultimate determinations as to whether all beneficial use has been taken. The council is empowered to fully grant relief requested by the property owner, provide lesser relief, or modify the zoning, changing the regulations so as to avoid other potentially similar situations in the future. Lesser relief may consist of approving a site plan that has more density than the ordinance permits, but less than the applicant has requested. If this is done, the zoning officer shall make a notation on the zoning ordinance with the appropriate reference number or ordinance. The council may find that the property has a beneficial use and do nothing. In any event, the landowner may seek relief from the courts if unsatisfied by the outcome.

Section 16.310 Street Vacations

Street vacations are a process that returns a public right-of-way to private ownership. There are two circumstances where this is required. The first, Section 16.311, is for segments of street that have been installed but not connected to other streets or left unimproved. The second, Section 16.312 is to close existing streets in order to make large-scale redevelopments on two or more blocks possible.

Section 16.311 Unused Street Vacation

A request to vacate an unused street segment may be requested by an adjoining property owner or the planning director or council.

- A. Eligibility. There are two circumstances under which streets are eligible for vacation: a right-of-way where the street was not built, or where the street cannot be connected to another street segment as intended.
- B. Unbuilt Streets. Where a street was platted to connect to a future street but never built, the vacation may be granted where property owners will take ownership of the land and certain of the following conditions are found.
 - 1. No lot will be deprived of public street access or frontage by abandonment.
 - 2. The possibility of connecting to the adjoining land is impossible due to development foreclosing the connection. OR
 - 3. The jurisdiction determines there is a physical problem that makes connection too costly for the connection to be made.
- C. Disposal of Street. In order to finalize a vacation, one of the following conditions shall be met.
 - 1. Where there are no improvements, at least one of the property owners shall agree to accept the street. OR
 - 2. Where street pavement has been installed, the owner(s) shall agree on a plan that preserves access, accept ownership, and pay the jurisdiction for the removal of the pavement.

Section 16.312 Redevelopment Vacations

Developments seeking to vacate an existing street may apply for vacation and submit a sketch plan of the proposed development. The vacation may be approved when the findings below are met.

- A. Planning. It is found that the proposed development would advance the planning for that area of the jurisdiction.
- B. Zoning. It is found that the proposed development would be permitted by the zoning ordinance.

- C. Pedestrian Access. It is found that the abandonment of the street would include a reduced right-of-way open to the public at all times that would provide pedestrian access across the block where through traffic is disrupted.
- D. Congestion. A traffic study shall be submitted that indicates that the street system in that part of the jurisdiction is adequate or that the developer will provide street improvements so that the closing will not result in significantly increased congestion or delay.
- E. Ownership. The owner controls all blocks abutting the vacation.

DIVISION 16.400 QUASI-JUDICIAL DECISIONS

Section 16.401 Quasi-Judicial Decisions

These are actions where there is no discretion, as the action can only be approved if all the essential conditions for approval are met. There is no latitude for the ZBA to approve or deny, except for the specific criteria in this section. The decision for all quasi-judicial actions shall have a finding of fact on each criterion and citation of the evidence used to determine the findings.

Section 16.402 Conditional Uses

An application for a conditional use shall only be for uses listed in Article 2 as conditional uses in Tables 2.205A–C. For approval, uses listed as conditional shall meet all standards for that conditional use in Article 2, and meet the following standards.

- A. Plan Consistency. If the use is listed as conditional in the district, it shall be deemed consistent with the comprehensive plan.
- B. Health and Safety. The determination of whether a proposal protects the health and safety shall include the following information.
 - 1. Water and sewer adequacy shall be determined by the jurisdiction's engineering department.
 - 2. Transportation adequacy shall be evaluated by a traffic study that indicates the level of service before and after the development and any improvements needed for safe access on- and off-site. If increasing the number of lanes is needed to maintain level of service, that is not a reason to deny approval. No conditional use shall be approved unless it takes access through an arterial, collector, or nonresidential street.
 - 3. Nuisance. The bufferyards required by Division 8.300 and Division 2.400 are generally adequate to avoid nuisance conditions but may be increased by a 0.3 opacity if such would make a better solution at the proposed location.
 - 4. Emissions are deemed adequate where they meet the standards of this ordinance.
- C. Character. If the conditional use is permitted in the surrounding character district, it is deemed consistent with character provided it meets the district intensity standards. If it adjoins a lesser intensity district, additional buffers may be required.
- D. Adverse Impact on Value. To demonstrate this, there shall be clear expert testimony that demonstrates that similar situations of land uses have resulted in declining property values. The development of affordable housing shall never be considered to have an adverse impact on property values.
- E. Mitigation. The ZBA may impose conditions such as off-site improvements, reductions of intensity of no more than 15 percent, increased buffers, increased resource protection where it would serve as a buffer, or site plan changes to the plan to mitigate potential problems.
- F. Approval. The ZBA may approve, with or without conditions, or deny a conditional use when the standards of this section are not met.

- G. Mapping. Upon receipt of a notice that a conditional use has been approved, the zoning administrator shall indicate the same in the proper place on the zoning map by use of the appropriate ordinance number or symbol.
- H. Changes. No change in the approved plan uses, or conditions shall be permitted without approval of a new conditional use permit, except those plan changes required by staff for technical or engineering reasons in final plat or land development approval, or during construction.

Section 16.403 Variance

The board of appeals, after closing a hearing as per Section 16.209, may authorize a variance in height, lot area, and yard regulations only in cases where strict compliance with the terms of the zoning provisions of this ordinance would result in unreasonable hardship. Any relief granted shall be in harmony with the intent of such regulations, providing relief in order to permit reasonable use of the property without injury to the public health, safety, and general welfare.

- A. Application. An application for a variance shall be filed with the ZBA after refusal of a zoning certificate by the zoning officer, or when the landowner submits a plan showing that uses of the land permitted on similarly sized lots in the district cannot be achieved on the property.
- B. Standards for Approval. The ZBA shall not grant a variance unless and until all the following conditions are met.
 - 1. Physical aspects of the property exist which are peculiar to that lot or parcel or existing structure that are not found on similar lands or structures in the same district.
 - 2. The literal interpretation of the provisions of this ordinance would deprive the applicant of rights or ability to build in a manner commonly enjoyed by other properties in the same district.
 - 3. No modulation such as a building pad can eliminate the hardship.
 - 4. That actions of the applicant or prior owners have not created the physical limitation in 1 above.
 - 5. The use requested is permitted in the district.
 - 6. The variance shall not confer on the applicant greater intensity of use than a similar, unrestricted property would be permitted in the same district.
 - 7. The use would be permitted on a similarly sized property with similar highway frontage.
- C. Prior Actions. The planning director shall present a history or prior decisions on similar variance requests. Variances should be granted in a consistent manner. If the ZBA wishes to approve a variance that is inconsistent with prior actions, it shall provide findings of significant differences in the situation that warrant a different result.
- D. Conditions. In granting the variance, the ZBA may prescribe appropriate conditions that grant the minimum relief needed to provide for reasonable use of the property. These shall include limits on use, placement of buildings, or other standards intended to protect neighbors from adverse impacts. In no event shall the conditions create health or safety problems on the site or adjoining property. All conditions imposed upon any variance shall be expressly set forth in writing with the granting of such variance.
- E. Violations. Violation of the conditions of approval shall be a violation of this ordinance.

Section 16.404 Appeals

Appeals may be taken by any person aggrieved by a decision, interpretation, or action by staff. Such an appeal shall be taken within 20 days of the action. The appeal shall be filed with the decision-maker whose decision is to be appealed and/or to the planning director or jurisdiction's attorney. The appeal shall specify the grounds thereof. The officer from whom the appeal is taken shall forthwith transmit to ZBA all the papers constituting the record of the action which is being appealed.

- A. Stay of Proceedings. An appeal stays all proceedings in furtherance of the action appealed. It also prohibits further work, if the action being appealed is a stop work order.
- B. Endangerment. Where the officer believes a stay would cause imminent peril to life, health, or property, the officer shall notify the jurisdiction's attorney. The officer shall prepare documentation as to the threat to life, health, or property. The attorney may take action to have the dangerous condition removed.
- C. Standards. The purpose of the appeal is to determine if the decision rendered is consistent with this ordinance. The body hearing the appeal is limited to the following determinations.
 - 1. The decision-maker made an error in reviewing whether a standard was met. The record must indicate that an error in judgment occurred, or facts, plans, or regulations were misread, in determining whether the standard was met.
 - 2. The decision-maker made the decision on standards not contained in this or other jurisdictional ordinances, regulations, state law, or a standard more strict or broad than those standards was applied.
 - 3. The decision followed the standards of this ordinance.
- D. Decision. ZBA may affirm, amend, or reverse, in whole or in part, the decision-maker's decision or order. Such a decision shall have all the authority of the officer from whom the appeal is taken.

Section 16.405 Plat Vacation

Plats that have been approved and recorded may, under certain conditions, be vacated. The planning director may file for a vacation of a plat. The ZBA shall conduct hearings for vacation of plat.

- A. Eligibility. The plat has expired, per Section 16.215. Where the following conditions exist, plats are eligible for vacation and make recommendations to council.
 - 1. Plats or portions of plats where streets and lots are underwater seasonally or daily or a portion is a wetland.
 - 2. Plats or portions of plats where homes have been destroyed and the streets and utilities serving them are damaged and are not to be repaired.
 - 3. Plats that no longer conform to zoning rules are not served with water and sewer and cannot meet on-site sewerage or water supply standards.
 - 4. A plat is still in single ownership, including partnerships or limited liability corporations, that has expired subject to Section 16.215 and has never received building or construction permits.
- B. Notice. Each owner of the lots to be vacated shall receive written notice of the proposed variation at least 30 days prior to the hearing.
- C. Landowner Testimony Landowners shall be given an opportunity to testify. They may testify as to:
 - 1. How the plat may be made buildable.
 - 2. What funding is available to begin construction immediately and post surety.
 - 3. If the jurisdiction intends to abandon streets and utilities, what actions will be taken to privately fund and maintain the infrastructure.
- D. Findings. The following shall be determined and evaluated in making a decision to vacate.

1. Ownership conditions, single or multiple. If multiple, is there a means to equitably distribute ownership?
 2. Is the plat or portions of it buildable?
 3. Has it expired?
 4. Has the jurisdiction made the decision to abandon streets or utilities that have been damaged?
 5. Is there a plan, financing, and surety necessary to complete the development of the plat?
 6. Are there private means for landowners to rebuild and maintain private streets and utilities?
 7. If the property is likely to be damaged by natural events in the future, is there insurance in place to cover emergency assistance and damage?
- E. Decision. Based on the findings above, a vacation shall be approved where the plat or portion thereof is not buildable. Expired plats or other plats shall be vacated if there is no way in which they may be completed in a timely manner.
- F. Vacation. A vacation, in whole or in part, shall result in the creation of a new parcel of land, consisting of that plat or portion thereof to be vacated. A condominium ownership may be established if there are multiple owners. If all or parts are unbuildable, that shall be noted on the new parcel.
- G. Sale. Unbuildable property may be sold. The jurisdiction or state may make an offer to purchase after having two independent appraisals of the property conducted, based on its unbuildable status. If the owners reject that offer, they may offer it for sale, but must note that the property is unbuildable.

DIVISION 16.500 MINISTERIAL ACTIONS

Section 16.501 Purpose

This division sets the rules of ministerial actions. Ministerial actions are those made by the planning director, zoning officer, or building official where the only allowable action is approval or disapproval, based solely on whether the action meets the criteria in this ordinance. There is no room to exercise discretion because only developments meeting all standards of this ordinance may be approved.

Section 16.502 Zoning Certificate or Building Permit

No land development, subdivision, or building permit shall be issued without a zoning certificate from the zoning administrator. The zoning administrator shall review the application and plans and determine that the application meets the standards of this ordinance. For subdivision and land developments, this shall be done by signing a certification, on the plat or plan to be recorded, that the ordinance requirements have been met. For buildings, the zoning administrator shall sign a zoning certificate and send this to the building official prior to the issuance of a building permit.

- A. Floodplains. Before any permit or certificate is issued, the zoning officer shall determine that the lot, building, or use is outside the floodplain or that, if in the floodplain, it conforms to the limitations of this ordinance.
- B. Revocation for Noncompliance. A zoning certificate and/or building permit is revocable upon a determination of noncompliance and issuance of a violation notice (Sections 16.602 and 16.603) with any conditions or requirements imposed under this ordinance.

Section 16.503 Occupancy Permit

No new or existing building or structure shall be occupied or used, and no change in the character or use of land or of a building shall occur, until a certificate of occupancy has been issued by the building official

and zoning officer, certifying that the building or use complies with all building ordinance and the regulations of this ordinance.

Section 16.504 Limited Use Approvals

The planning director shall make limited use reviews in conjunction with the zoning officer and development review staff. Such reviews shall be limited solely to determining whether the conditions specified in Division 2.300 for that limited use have been met. If the conditions have been satisfied, the use shall be approved. If not, the use shall be denied and the developer notified in writing of the deficiencies. For any subdivision or land development, a signature on the plat or plan shall indicate this.

Section 16.505 Sign Permits

The zoning administrator shall review the plans for signs using the provisions of Article 9 and approve all applications that meet those standards. If an application does not meet the standards, the permit shall be denied and the person requesting the sign permit shall be notified in writing as to the deficiencies to be corrected.

Section 16.506 Interpretations

Interpretations are made when there are requests for an interpretation as to the meaning of an ordinance provision. All requests for an interpretation shall be presented to the zoning administrator. The planning director and zoning administrator then makes an interpretation and creates a file that is available to the public and serves to clarify that provision.

- A. Use. Where the interpretation regards a use that is unclear, the North American Industrial Classification System (NAICS) ordinance shall be used to assess the potential for adverse impacts such as noise, traffic, and other nuisances in order to place it with the most similar uses.
- B. Intensity. This is a matter of determining whether the standard is a maximum or minimum standard. In maximum standards, numbers are rounded down (*4.9 dwelling units are rounded down to 4*). Minimum values are rounded up (*37.4 canopy trees are rounded up to 38*). Where decimal values are multipliers, the rounding comes after mathematical operations are done.
- C. Performance. When evaluating an ordinance provision as to its meaning or application, no interpretations shall lessen protection, but may provide greater flexibility in meeting this ordinance's objectives. Determining the provision's purpose in protecting the public health, safety, and welfare should guide the interpretation. The comprehensive plan may be used as well as the purposes of each article or division.
- D. Consultation. The planning director may confer with the attorney, or others involved in drafting the ordinance.
- E. Documentation. The interpretation shall be made in writing and applied to all subsequent actions unless overturned on appeal or ordinance amendment. In a computerized ordinance, an interpretation is noted in the text that an interpretation exists and allow immediate access.
- F. Text Amendments. When text amendments are proposed, the zoning administrator shall submit all interpretations for inclusion in the amendment.

Section 16.507 Subdivision and Land Development Plans

The plat committee shall review all plans. In the review of all submissions, the determination shall be made that the plans conform to the zoning standards in Articles 1–11 of this ordinance. In addition, the

subdivision and land development regulations in Articles 12–14 shall be reviewed. Approval of all engineering shall be made by the public works and transportation departments. In conducting reviews, the following rules shall apply.

- A. Plan Review. The review of subdivisions and land development shall follow the standards of Divisions 12.200 and 12.300.
- B. Conditions. The planning director shall have the authority to impose conditions in the approval of a plan. That authority is limited. In terms of design, it is limited to the provisions of Article 11 and Division 12.300. For engineering, the jurisdiction's engineer shall have the authority to require changes to ensure connections to streets or infrastructure that works adequately with the jurisdiction's systems. This does not permit increasing the standards that are contained in this ordinance.
- C. Revisions. If revisions are required from A above, they may require conditions to be met with the subsequent submission, or, if extensive enough, the plat committee may require revised plans to be submitted for that plat stage. Final plats must conform before approval.

Section 16.508 Sketch Plan

The intent of the sketch or concept plan is to evaluate the concept of the development and its basic conformance with zoning. The following factors shall be considered.

- A. Conformance with Zoning. Determine whether the plan conforms with the zoning. If not, make recommendations to bring it into conformance.
- B. Design. Evaluate the plan for general design using the criteria in Division 12.300 and provide direction, if necessary, to improve the plan.
- C. Infrastructure. Evaluate whether there are transportation or infrastructure constraints that the developer will have to address in preliminary and final plans. Indicate any special studies on transportation, the environment, design, or any other issue that need be submitted.

Section 16.509 Modulation Approvals

Article 10 provides detailed standards by which the planning director may modulate the regulations of this ordinance. That article specifies the conditions under which modulation is permitted. If the conditions are met, the planning director shall approve the appropriate modulation. Staff is authorized to do so only as specified and may not add their own standards or conditions to those specified.

Section 16.510 Pattern Book

The pattern book review shall be conducted at the same time that subdivision and land development plans are being reviewed. The standards in Division 12.500 control the pattern book review. Approval of a pattern book may also include permitting modulations needed in order to implement the pattern book plan. The subdivision and land development schedule shall be extended for 15 days to account for the greater complexity.

- A. Approval. A preliminary or final pattern book shall be approved by the planning director at the same time the preliminary or final plans are approved. Written findings on the approval shall be prepared.
- B. Effect of Approval. The approval provides for a final plat and/or development plan and accompanying architectural and design elements. Its approval is binding, and all submissions for building permits shall be consistent with the pattern book. Inconsistent building plans shall be denied building permits.

Section 16.511 Review

The planning director shall conduct a review of the environmental impact report as submitted. In conducting this review, the jurisdiction may hire, at the applicant's expense, any technical experts needed to supplement the expertise of staff. The staff shall submit to the developer any alternative locations or site design alternatives, or mitigation strategies that shall be added to a revised report. After receipt of a revised environmental impact report, the planning director shall draft the staff recommendations and, within 30 days of the recommendation, schedule a public hearing on the report. At the conclusion of the hearings, staff shall have 30 days to submit final recommendations.

Section 16.512 Annual Report

The planning director shall prepare an annual report on variances, appeals, and conditional approvals that classifies them by type, outcomes, and conditions attached. This report shall be provided to the council, zoning board, and planning commission, along with any ordinance amendment that should be recommended, based on the report. The council may find it disapproves of variances granted and direct the ZBA not to approve further variances of this type.

DIVISION 16.600 VIOLATIONS AND ENFORCEMENT

Section 16.601 Purpose

The purpose of this division is to provide the procedures and rules for the enforcement of this ordinance. It provides the duties of the zoning administrator and attorney and the procedures to stop violations and seek court enforcement. The intent is to resolve violations short of court proceedings.

Section 16.602 Complaints

Any person may file a written complaint with the zoning administrator, alleging a violation of this ordinance. Such a complaint shall state the basis for the alleged violation and reference the section violated. Phone complaints will also be taken, provided the person making the complaint provides their name, address, and a description of the violation. The following actions shall take place after receiving a complaint.

- A. Investigation. The zoning administrator shall conduct an on-site investigation and reasonably determine whether a violation has occurred.
- B. Record. A permanent file shall be made, documenting the violation and all subsequent actions. The record shall be public.
- C. Action. The zoning administrator shall issue a violation notice and initiate action as indicated in Section 16.603, based on complaints or any violations observed by the zoning administrator or zoning inspectors.

Section 16.603 Violation Resolution

Violations are to be resolved by getting the violation to be corrected or discontinued. The following shall be the procedure leading to resolution.

- A. Notice. The zoning administrator shall have a notice delivered to the property owner, lessee, or other persons responsible for the violation. In addition, the notice shall be posted in a conspicuous place on the property. If the violators cannot be located personally, the zoning administrator's mailing of a copy of same to the person and posting on the property shall be considered sufficient for delivery under this section. The notice shall contain the date, nature of the violation, time to correct the violation, and contact information for the zoning administrator. If the violation is discovered during construction, an order to halt all work shall be given to the contractor on-site.
- B. Citation. If the infraction continues to occur after the reasonable time stated, or if construction continues after the notice, the zoning administrator will issue a citation to the person or persons responsible in the form and manner as outlined in this section. In the event of an immediate threat to health or safety, the zoning administrator may issue a citation without the prior issue of a warning.
- C. Contents. The citation shall be in writing and shall contain the following:
 - 1. The name and address of the person charged (or warned).
 - 2. The nature of the violation.
 - 3. The location of the violation.
 - 4. The date(s) of the violation.
 - 5. Date the notice was posted and mailed.
 - 6. The phone number and office hours of the zoning administrator with whom the violation may be discussed.
 - 7. The civil penalty for the violation (Section 16.605).
 - 8. Notice that the owner, tenant, or other party has 10 days to correct the violation at no cost (Section 16.604), and the manner, location, and time in which the fine may be paid, or the violation corrected, if applicable.
 - 9. Notice of the person's right to stand trial or take the action to court.
- D. Delivery. The citation shall be delivered to the occupant and mailed to the owner. If the violation occurs where the residence or building is unoccupied, the mailing and posting on the property shall constitute delivery.
- E. Mail. A written notice containing the same information as the posted notice shall be sent to the owner or any other person having control of the property, at the last known address of the owner, or at the address of the person having control, by regular mail.

Section 16.604 Correction

If the owner, lessee, or other person has made corrections, the zoning administrator shall be notified, and an inspection made. If the violation has been corrected, the zoning administrator shall provide written verification of the correction and enter this in the file.

Section 16.605 Civil Penalty

The person responsible for the violation has 10 days to correct the violation and have it inspected without penalty. The intent of this section is to give the violator every opportunity to correct the violation. If the violation continues, the following actions shall be taken.

- A. First Fine. A fine of \$200 dollars is assessed and the violator has five business days to correct from the posting and mailing of the notice.
- B. Second Fine. If the violation has not been corrected, a fine of \$300 (totaling \$500) is assessed and the violator has five days to correct the violation from the posting and mailing of the notice.
- C. Third Fine. If violation has still not been corrected, a fine of \$500 (totaling \$1,000) is assessed and the violator has five days to correct the violation from posting and mailing of the notice. At this point, the zoning administrator shall ask the attorney to prepare for sending the violation to the courts.
- D. Fourth Fine. If the violation has still not been corrected, a fine of \$2000 (totaling \$3,000) is assessed and the violator has five days to correct the violation from posting and mailing of the notice.
- E. Fifth Fine. If the violation has still not been corrected, a fine of \$3,000 (totaling \$6,000) is assessed and the violator has five days to correct the violation from posting and mailing of the notice. Notice will be given of intent to take the matter to court.
- F. Subsequent Continuance. After notice is given of intent to take the matter to court, every five days there shall be a new violation notice and fine of \$3,000 until the matter is resolved in court or corrected.
- G. Payment. Payment of the fines shall be to the jurisdiction and made at the planning department office.

Section 16.606 Court

The attorney shall, at the time of the fifth fine, take the violation to the court to compel corrective action of the violation, including removal. This shall follow the rules of the court having jurisdiction in the matter.

Section 16.607 Abatement by Jurisdiction

In the event of an immediate threat to the public health and safety, the zoning administrator and attorney shall provide notice to the owner, tenant, or other party that the jurisdiction will be on the property on a specific date to eliminate the threat to the public health and safety by stopping construction, installing shoring, or demolition, as required to eliminate the threat. Other violations shall be processed in the normal manner after the site is safe.

ARTICLE 17 PURPOSE AND LEGAL STATUS

DIVISION 17.100 PURPOSE

Section 17.101 Purpose

This article addresses full title and purpose of this ordinance. It includes required legal elements, adoption, repealers, conflict resolution, and severability.

Section 17.102 Title

This is the Jurisdiction Land Development Ordinance (LDO) which is cited throughout as “ordinance.”

DIVISION 17.200 ORDINANCE PURPOSES

Section 17.201 General

This ordinance is intended to protect the interests of both present and future residents, neighborhoods, and the general public from adverse impacts of land uses and construction. Each standard has been developed as a regulatory response to an identifiable planning goal, negative impact, or problem. At the same time, the ordinance is intended to respect landowners' rights to develop their land and ensure a beneficial use of their property. Flexibility, development options, and incentives are provided to encourage developers to meet the highest standards, rather than penalizing them with a loss of density through rigid controls.

Section 17.202 Planning

The jurisdiction has been planning for its future since first adopting a comprehensive plan in 1935. That planning has continued to be updated ever since, with the most recent version being the comprehensive plan of 2015. It is the purpose of this ordinance to provide the legal framework for implementing the comprehensive plan.

Section 17.203 Community Character

This ordinance is intended to protect the character of neighborhoods and to produce the desired future character as the jurisdiction grows. This is accomplished by the use of zoning districts based on nine community character types. Three are rural in character, natural, agricultural, and countryside, where space is dominant and the view to the horizon is to be preserved. There are two sub-urban types, estate and suburban, where space and vegetation dominate buildings. There are three urban types, urban, urban mid-rise, and urban core, where buildings, enclosed space, and height become critical distinguishing elements between types. A fourth type is auto-urban, where parking uses more land than do buildings. The achievement of any character type does not depend on land use but on the intensity, open space, landscaping, parking, and height standards. These standards permit nearly all housing and land uses to be built in sub-urban and urban districts because spatial character is controlled by performance standards. The nine community character districts permit the development of neighborhoods or communities that provide for a full range of land uses including residential, commercial, and employment. In addition, there

are use districts that provide for employment with no residential component. The regulations are designed to promote the jurisdiction's historic and cultural resources that enhance the jurisdiction's character.

Section 17.204 Nuisances

The protection of neighboring uses from nuisances that could reduce the value and enjoyment of their property from nuisances associated with a use or activity is a primary purpose of this ordinance. The following components work together to provide this protection.

- A. Community Character Standards. The design standards of these districts provide open space and intensity standards that ensure all uses permitted will have compatible characters.
- B. Performance Standards. Performance standards are directed at controlling specific nuisance sources such as noise, light, or vibrations by limiting them or controlling them to reduce their nuisance potential.
- C. Bufferyards. Bufferyards mitigate nuisances by screening them and reducing glare, noise, odor, and problems through barriers and distance. Bufferyards are required at district boundaries, where they mitigate nuisances associated with different intensities.

Section 17.205 Sustainability

Combating global warming, rising sea levels, and preventing environmental disasters are some of the most important planning issues. This ordinance promotes sustainability with the following regulatory approaches.

- A. Environmental Protection Standards. Environmental protection standards protect specific amounts of natural resources, retaining them in a natural vegetative state, reducing the release of stored carbon during development. Protecting these resources increases sustainability by avoiding flooding, increasing groundwater recharge, filtering pollutants, storing carbon, and increasing oxygen levels.
- B. Clustering. Cluster development is sustainable because there is no loss of efficiency. It allows resources to be protected without losing density. The regulations provide bonuses to encourage the resource protection and increase the density of development, which protects more land from development and reduces the amount of energy used to develop infrastructure and maintain it.
- C. Sustainable Energy. There are regulations to require or encourage solar and wind energy.

Section 17.206 Housing

The provision of decent, sound, and affordable housing for all residents is the objective. The market has been unable to meet this goal, leaving a significant portion of the population with limited access to decent housing. This ordinance provides tools that provide for more affordable housing.

- A. Market Housing. The goal is to eliminate constraints that make it more difficult or costly for the private sector to build affordable housing.
 - 1. All housing types except mid-rise and high-rise multifamily are permitted by right in all character districts, eliminating the need for a zoning change to build a housing type.
 - 2. Small housing units are permitted for single or two-person households.

3. Clustering provides for efficient zoning, eliminating losses of efficiency that reduce achievable density. Unit types require three sizes of units, with 25 percent being smaller and more affordable units, broadening the market availability of more affordable units.
- B. Affordable Mandate. A mandate requires affordable units in each development.
- C. Subsidized Housing. The ordinance provides a density bonus to encourage developers to build government-funded housing.

Section 17.207 Public Health, Safety, and Welfare

The purpose of this ordinance is to protect public health, safety, and welfare with standards intended to achieve this goal. A variety of sections of the ordinance address specific types of protection.

- A. Hazard Areas. In areas where threats to life and property are predictable, including in floodplains, wetlands, oceanic shorelines, unstable soils, karst, and avalanche zones, development is limited or prohibited.
- B. Roads. Performance standards provide access control in order to reduce accidents.
- C. Water. Potable water is a requirement of all development. The quality of both surface and subsurface water is to be maintained as suitable for drinking, recreation, and retaining habitat value.
- D. Sewers. All development must meet performance standards of sewerage.
- E. Light and air. Lot and bulk standards provide residents' dwellings with adequate light, air, outdoor living, and recreational space.
- F. Recreation. The regulations are intended to ensure the jurisdiction, neighborhoods, and developments have sufficient recreational land and opportunities.

Section 17.208 Justifiable Expectations

This ordinance is intended to permit the expected growth and increased economy of the jurisdiction. Landowners should anticipate that rising property values associated with this growth are not unreasonably limited by the ordinance.

- A. Enhanced Values. The regulations are intended to promote quality development that has a positive influence on the value of land, by preserving the character of neighborhoods, creating attractive streets, preventing monotony, controlling signage, and protecting the jurisdiction's natural resources.
- B. Flexibility. Permitting clustered development, all dwelling unit types, and most uses in all districts eliminates many elements that constrain the ability of a developer to build.
 1. Zoning changes are not needed for different housing types.
 2. Review of subdivisions or land developments cannot be used to lower density.
 3. Employment and commercial uses are permitted in all districts consistent with the character of those districts.
- C. Incentives. Incentives are used to encourage developers to perform at the highest level, rather than using standards that prohibit development.
- D. Staff Approvals. The ordinance eliminates costly and time-consuming processes.
 1. Modulation and limited uses eliminate most of the need to seek variances.

2. Limited uses are extensively used, eliminating the need for variances or uncertain conditional use approvals. Only a few rare uses that have high nuisance potential must apply for conditional approval.

DIVISION 17.300 LEGAL STATUS

Section 17.301 Adoption

This ordinance was adopted by the council on 5 December 2018. It took effect on 1 January 2019.

Section 17.302 Repealer

The following ordinances were repealed as of 1 January 2019: the Jurisdiction Zoning Ordinance of June 1998, as amended; and the Subdivision and Land Development Regulations of March 1991, as amended.

Section 17.303 Conflicting Provisions

Every effort was made to ensure the regulations in this ordinance do not conflict. Requirements for affordable housing, resource protection, or bufferyards do not reduce intensity, as is the case in most zoning. Where multiple regulations apply, the stricter regulation shall prevail. Where there is a conflict between this ordinance and regulations of state or federal government, the most restrictive shall be controlling. Where other jurisdiction regulations thwart the intent of this ordinance, the planning director shall bring the problem to the council and seek relief from that regulation, in that particular case, or seek changes to other regulations.

Section 17.304 Severability

If any article, division, section, or portion thereof of this ordinance is held unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected. If any application of this ordinance to a particular structure, land, or water is adjudged unconstitutional or invalid by a court of competent jurisdiction, such judgment shall not be applicable to any other structure, land, or water not specifically included in said judgment.

Section 17.305 Interpretation

In making an interpretation in this ordinance, administrators or others should understand that the ordinance was designed to protect both individual property owners and the general public from adverse impacts which might otherwise be the result of a proposed land use. The performance standards seek to protect or achieve a specific objective. Clustering and incentives were designed to minimize constraints on development without sacrificing protection. The following should be reviewed.

- A. Purpose. The purpose of the section being interpreted should be understood.
- B. Balance. If there is a concern, the interrelationship of the text to other sections in this ordinance should be reviewed. The ordinance has been carefully balanced with some regulations designed to protect and others providing incentives. Clustering, incentives, and modulation have all been used to offset the constraints imposed by standards to prevent reductions of intensity or use.

Section 17.306 Use Interpretation

Where a use is not defined in Division 18.200 or Division 18.300, the following shall guide the interpretation. The proposer shall provide a detailed description of the use. The zoning officer shall refer to the North American Industrial Classification System (NAICS) to determine if it is listed there. Where NAICS does not list the use, the description of the use shall be reviewed to determine nuisances or other differentiating characteristics. The interpretation of use shall place it with the use to which it is most similar in nuisance or scale characteristics.