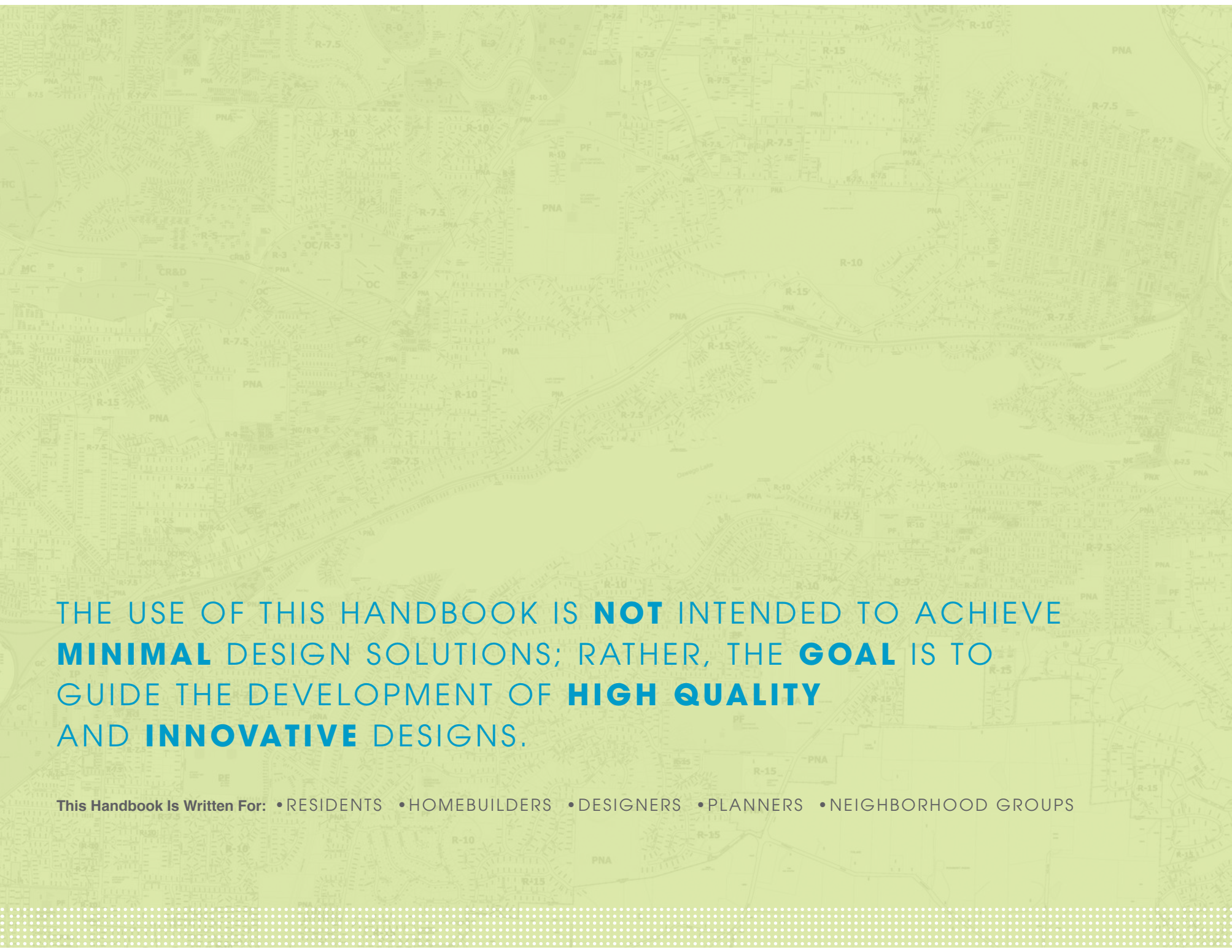




INFILL DESIGN HANDBOOK

CITY OF LAKE OSWEGO, OREGON



THE USE OF THIS HANDBOOK IS **NOT** INTENDED TO ACHIEVE
MINIMAL DESIGN SOLUTIONS; RATHER, THE **GOAL** IS TO
GUIDE THE DEVELOPMENT OF **HIGH QUALITY**
AND **INNOVATIVE** DESIGNS.

This Handbook Is Written For: • RESIDENTS • HOMEBUILDERS • DESIGNERS • PLANNERS • NEIGHBORHOOD GROUPS

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June 2011

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INTRODUCTION

INFILL DESIGN HANDBOOK

Background

All new residential development is considered Infill development in Lake Oswego. Examples of Infill include a new house on a vacant lot, a house that replaces a house that is torn down, a two or three parcel partition, or a multi-lot subdivision.

In 2001, in response to citizens' concerns about the character and impact of new Infill development, the City Council appointed an Infill Task Force to develop concepts to make Infill more compatible with existing neighborhoods. The Task Force included citizens representing neighborhood associations as well as building industry representatives. Their recommendations for code amendments were adopted by the City Council in 2003.

Following a few years of home construction under the new standards, the Task Force was reappointed to test the effectiveness of the standards and to address a variety of additional issues including residential design review, structure design and setback planes, flag lots, sloped lots, and the use of open space in Planned Developments. The City Council adopted revisions to the Infill standards in 2010. Included in the adoption was the charge to create an Infill Design Handbook which graphically describes key principles and guidelines for good Infill design.

Provisions of the development code related to residential Infill will continue to be evaluated over time to ensure that the best possible Infill standards are in place.

This handbook, a “best practices” manual, will help to create the best and most compatible design, meet the applicable Infill code requirements, and result in maximum city and community support.

Existing Infill Character



Copies of the following adopted neighborhood plans that can be picked up at the City or viewed at <http://www.ci.oswego.or.us/plan/Neighborhoods/naplan.htm>:

- Evergreen Neighborhood Plan (LOC 50.08A)
- First Addition Neighborhood Plan (LOC 50.07)
- Glenmorrie Neighborhood Plan (LOC 50.08B)
- Lake Forest Neighborhood Plan
- Lake Grove Neighborhood Plan (LOC 50.08C)
- Old Town Neighborhood Plan (LOC 50.09 & 50.66)
- Palisades Neighborhood Plan
- Waluga Neighborhood Plan

Context and Compatibility

The real estate market and the increasing value of land have exerted significant influence on the size of houses being built today. Blending an Infill house into its context can be challenging, particularly when abutting houses are small and predate the Infill site by 40 years or more. In Lake Oswego, the result is that many new Infill houses are larger and look substantially different than neighboring houses.

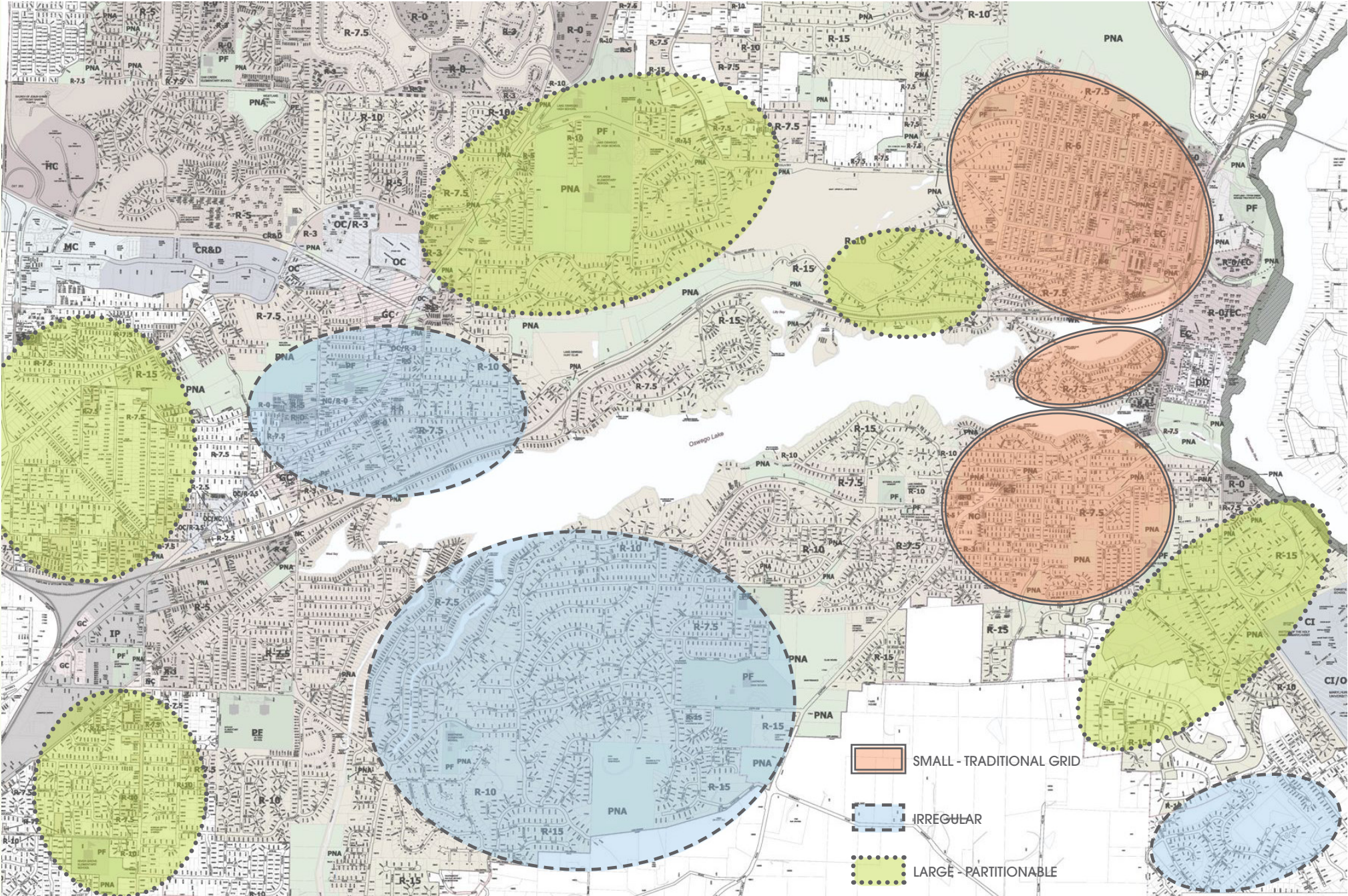
As can be seen with the adoption of the Infill standards and various neighborhood plans (see box to the left), compatible Infill development is an important community goal. The new house should respond to the unique context of its development site and fit in with both old and new well-designed houses. Choosing pre-designed house plans without first exploring the existing conditions makes it difficult to achieve the goals of contextual and compatible design.

Before designing or choosing house plans for an Infill site:

- Look beyond the site to consider the orientation of neighboring houses, locations of drive-ways, and nearby landscaping to find the optimal placement. Architectural features such as porches, bay windows, chimneys, and roof projections should demonstrate a likeness in scale from house to house for greater compatibility.
- Consider window placement on neighboring houses when locating windows to maximize views and solar access while preserving privacy.
- Respond to the site's natural topography to minimize extensive re-grading.
- Use existing mature landscaping to shade the house, to minimize its perceived mass and scale, and to create privacy.

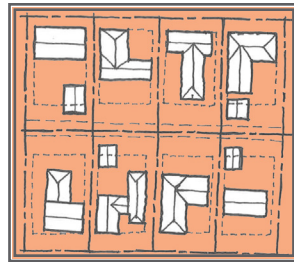
While using this handbook, consult the applicable neighborhood plan to identify the neighborhood design guidelines and unique compatibility measures. In addition, review the applicable underlying zone regulations available at www.ci.oswego.or.us.

Sample Distribution of Lot Types



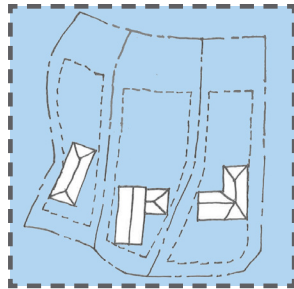
Existing Lot Types

Based upon dimensions and shape, lots in Lake Oswego can be classified as one of the following three types:



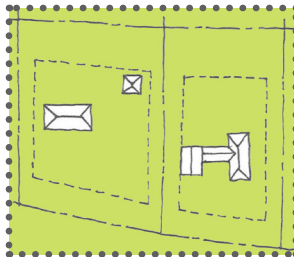
1. SMALL - TRADITIONAL GRID

Characterized by rectilinear street pattern commonly seen in older neighborhoods. Lots are small, typically 5,000 to 6,000 square feet. Infill houses on these lots tend to be large relative to the size of the lot. The footprint typically covers 30-35 percent of the lot. Lots of this type are most commonly found in the older neighborhoods of Lake Oswego such as First Addition, Old Town, Evergreen, portions of Hallinan, and portions of McVey-South Shore.



2. IRREGULAR

Characterized by non-parallel property lines formed by curvilinear roads and/or uneven topography. The size of the lot often exceeds the minimum lot size but is either normally not large enough to be partitioned or cannot be partitioned because of its irregularity. Their challenging geometries are sometimes additionally impeded by the presence of trees or water features which may influence the siting of a house. Lots of this type occur throughout the city but are concentrated in neighborhoods such as Palisades, Lake Grove, Waluga, Lakewood, Bryant, and Lakeview.

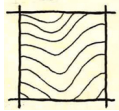


3. LARGE - PARTITIONABLE

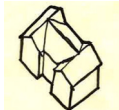
Characterized by either irregular or rectilinear property edges. The size of the lot is at least twice as large as the minimum allowable size in the zone. While compatibility and context will drive the design of Infill houses on small and irregular lots, Infill houses constructed large and partitionable lots have greater flexibility in the building design because there are more opportunities for siting. Lots of this type occur throughout the city but can be commonly found in Forest Highlands, Lake Forest, and Glenmorrie.

DESIGN PRINCIPLES

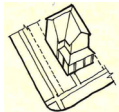
RESIDENTIAL INFILL HANDBOOK



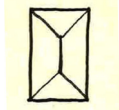
TO TOPOGRAPHY OF THE SITE



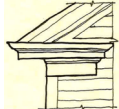
MS MASSING AND SCALE



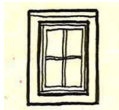
PP PRIVATE TO PUBLIC PROPERTY
TRANSITION



RF ROOF FORMS



MA EXTERIOR FINISH MATERIALS



OP WALL OPENINGS



AS ACCESSORY STRUCTURES



LA LANDSCAPING, RETAINING
WALLS, AND FENCES

How to Use this Document

Unlike a community development code or building code which tells what cannot be done, the purpose of this handbook is to provide visual inspiration and best practices for what can be done.

Each Design Principle contains an intent statement and background summary. The Guidelines that follow will help the user apply each Design Principle. The Guidelines are illustrated with photos and sketches as applicable.

Some of the Design Principles and Guidelines may not apply to your Infill lot. While the Design Principles and Guidelines herein contain good design strategies for any Infill property, if your Infill lot is located in an existing Planned Development, it may not be subject to Infill standards.

USE OF THE EXISTING LOT TYPE ICONS

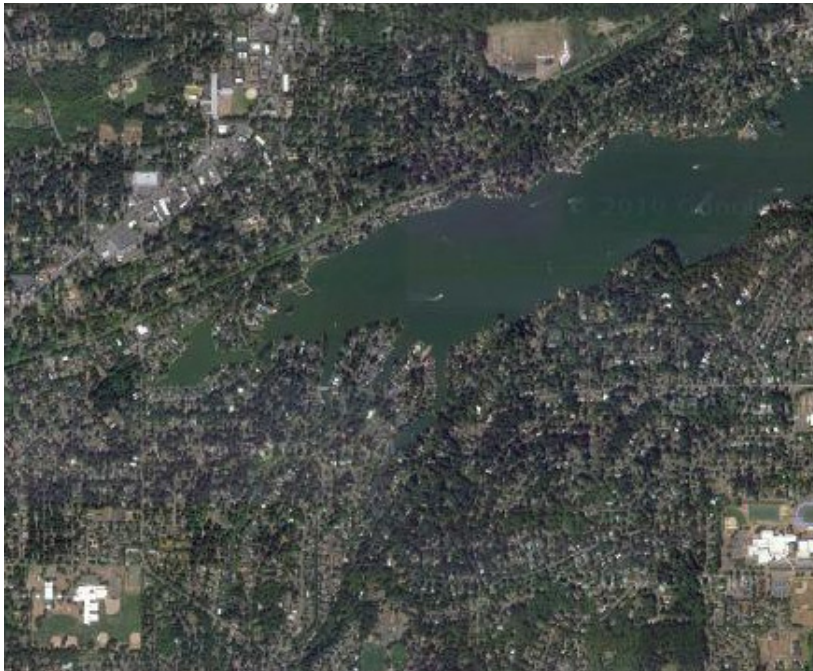
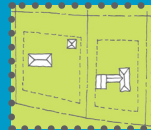
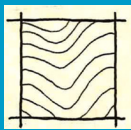
In general, the Design Principles apply to all three lot types described on page 5. When a lot type icon is highlighted, meeting the Design Principle is critical for that particular lot type.

HOUSES SHOWN IN PHOTOS

The photos of houses used in this document are for illustrative purposes. In some cases, the photos include houses that may not fully conform to the city's Infill standards and therefore may not be able to be built in Lake Oswego. An image must be considered in relation to the Principle that it is illustrating.

TO TOPOGRAPHY OF THE SITE

MINIMIZE THE IMPACT TO EXISTING TOPOGRAPHY IN THE SITING OF A NEW HOUSE IN ORDER TO BLEND WITH THE CONTEXT OF THE EXISTING NEIGHBORHOOD.

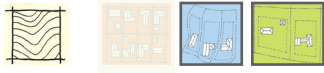


Lake Oswego is a city comprised of a vast array of topographic variation and natural resources including: natural hillsides; an extensive tree canopy; water features such as Oswego Lake, its canals and tributaries, and the Willamette River. These features can present both challenges and opportunities when siting a house on a piece of property.

Topography directly affects the design of a house. The required setbacks from tree groves and streams limit the position of a house on its site and affect the potential of a large site to partition.

Given special attention, natural features can be an asset to a site. Strategic location and orientation of a new house can take advantage of shading provided by an existing tree grove. A deck can capture the view of a beautiful stream channel.

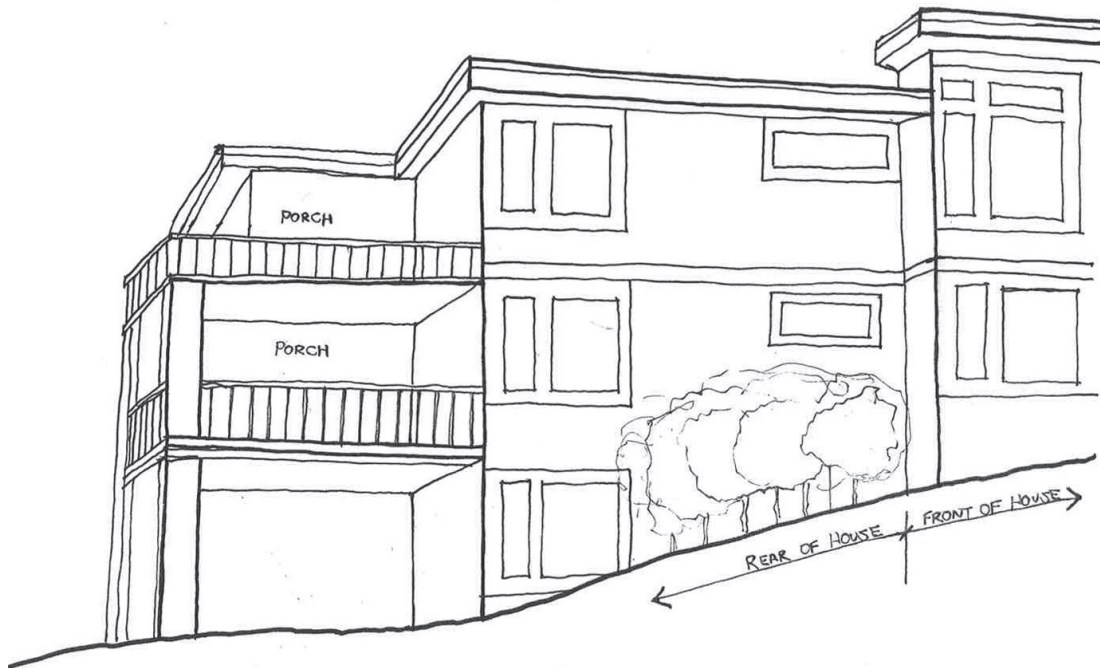
Topography is one of the most challenging variables of a site. Slope conditions can vary from site to site which can make contextual design challenging. Large lots that contain both topographic variation and natural resources may mean the house is unseen from the street. However, when a house is sited on a slope and can be viewed from the street, stepping the massing along the slope to reduce the bulk will create compatibility as well as a well-designed site-specific house.



TO-1 Step the Massing

Step the massing of a house at a consistent rate with the slope of the site to minimize the impact of bulk created on the downslope side of a lot.

- This is important when the house and the steepness of the slope can be seen from the street.



TO-1 Step the massing of a house as it goes down the hill. On the downslope side, designing porches or decks not only minimizes bulk but takes advantage of a potential view down the hillside. Shallow pitched roofs as shown here may not be seen from the downslope side of a site.



(1) The high part of the massing of this house occurs at the highest grade on site. The bulk of the larger volumes is softened by strategically located landscaping. **(2)** The volume of the building steps down the hillside away from the street, so that the bulk cannot be seen from the front. The driveway (not shown) is accessed on grade. **(3)** Locating the porch on the downslope side of a site breaks up the scale of what would otherwise be the largest volume of this house.



TO-2 Use Topography to Diminish Scale

For houses that can be viewed from the street, use pre-existing site topography to diminish the scale and appearance of both attached and detached garages by locating them on grade with or closest to the street grade.

- Refer to the development code for additional site design flexibility when the slope of the site exceeds 20 percent.



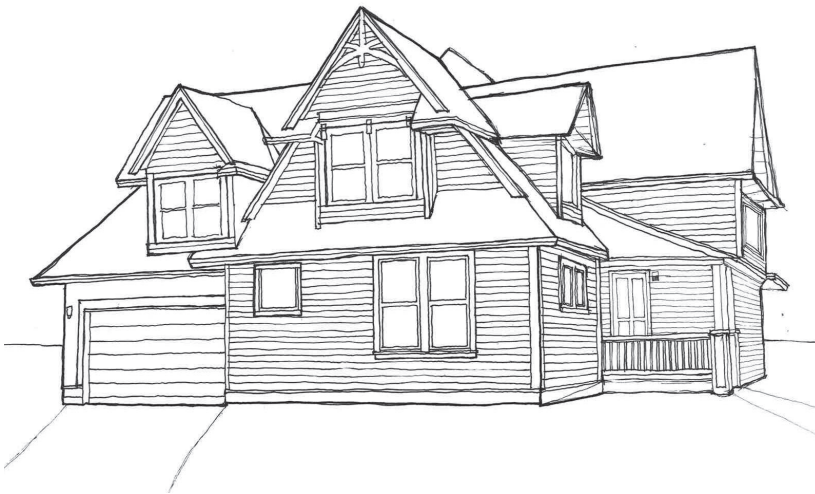
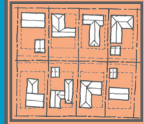
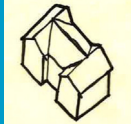
TO-2 The position of this garage is at the highest grade of the site which is also at street grade. The bulk of the house steps down the hillside to the left and behind the garage.



(1) The position of the garage of this house is cut into the terracing of the front yard allowing vehicular access directly from the street grade. Note the common use of brick masonry at the recessed front facade, the terrace walls, and the arch detail over the garage. **(2)** The position of the garage of this hilltop house is at the lowest grade which minimizes the bulk created by the garage. **(3)** The garage on this house is at the lowest point of the slope, minimizing the impact of both the garage doors and the presence of the driveway on the site.

MS MASSING AND SCALE

IN ORDER TO BE COMPATIBLE WITH SURROUNDING EXISTING CONSTRUCTION, MINIMIZE THE BULK OF A HOUSE PARTICULARLY ALONG THE SIDE PROPERTY LINES THROUGH THE USE OF DETAIL ELEMENTS SUCH AS WALL OPENINGS, BAYS, AND OTHER ARCHITECTURAL FEATURES.

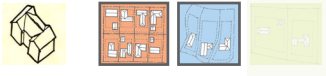


How a house's mass is distributed on its site will influence its overall appearance as well as the streetscape. The mass of a house defines the locations of rooms. It also establishes the location of the front door and other wall openings. Windows on upper floors should be located and oriented to preserve the privacy of neighboring houses when possible.

Roof forms and roof pitches contribute to the massing of a house. Minimizing the height and span of roof pitches can reduce the perceived massing of a house.

The perception of a building's massing is also affected by the sizes and locations of wall openings, the texture of exterior finish materials, and shade and shadow patterns created by architectural features.

The following guidelines illustrate a set of strategies that designers can utilize to reduce the perceived scale of a new Infill house through its massing.



MS-1 Scale and Cohesion

Create a sense of scale and cohesion of massing between adjacent houses on small lots and when houses can be viewed together in context.

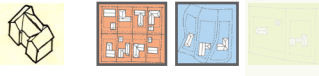
- Where possible, match grade lines, floor heights, and roof heights with adjacent houses of good design to create compatibility.



MS-1 Examples of cohesive streetscapes containing compatible massing elements.



(1) Though different styles, these two houses share similar second floor heights, roof heights, and projecting elevation bays (circled). **(2)** These two houses share the same second floor height, ridge height, and footprint. Though one of the elevations suggests a third floor, the massing of both is generally the same. **(3)** While stylistically different, this Infill house follows the floor lines and uses a similar scale of trim as the older home to the left.



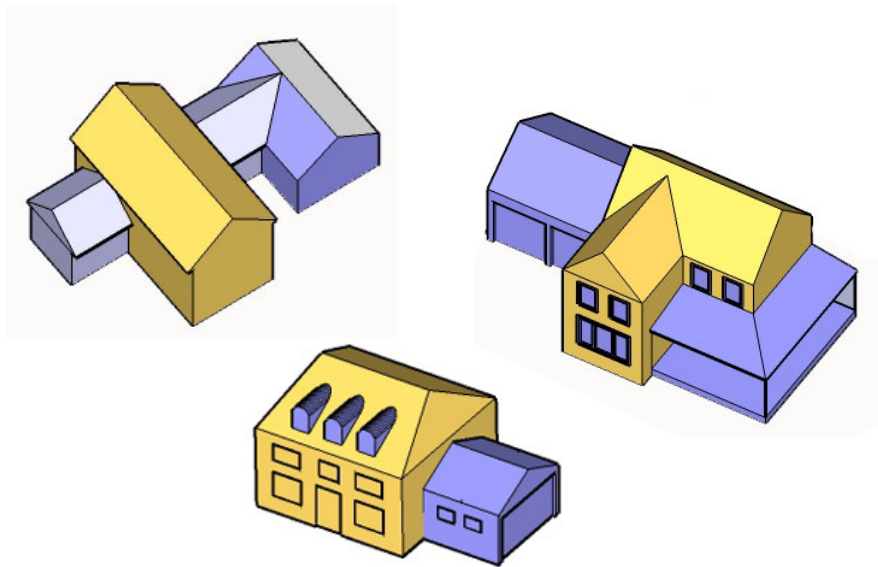
MS-2 Break Down the Mass

Break down the mass of large houses into a series of smaller forms, particularly when houses are built to the setback lines on small lots. When possible on larger lots, set the structure back enough from the property lines to allow for greater design flexibility.

MS-3 Use Architectural Features

For all lot types, incorporate appropriate architectural features such as porches, bay windows, and chimneys, to scale down large volumes and reduce visual impact.

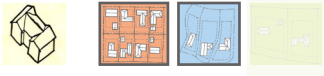
- Architectural features such as porches, bay windows, chimneys, and roof projections should demonstrate a likeness in scale from house to house for greater compatibility.
- Use natural site features such as existing trees to augment architectural features on large lots so that the house blends better to its site.
- On large lots, set the house back from the property lines to create more opportunities for landscaping and privacy.



MS-2 Here are a few examples of how to augment primary masses (yellow) with secondary masses (purple).



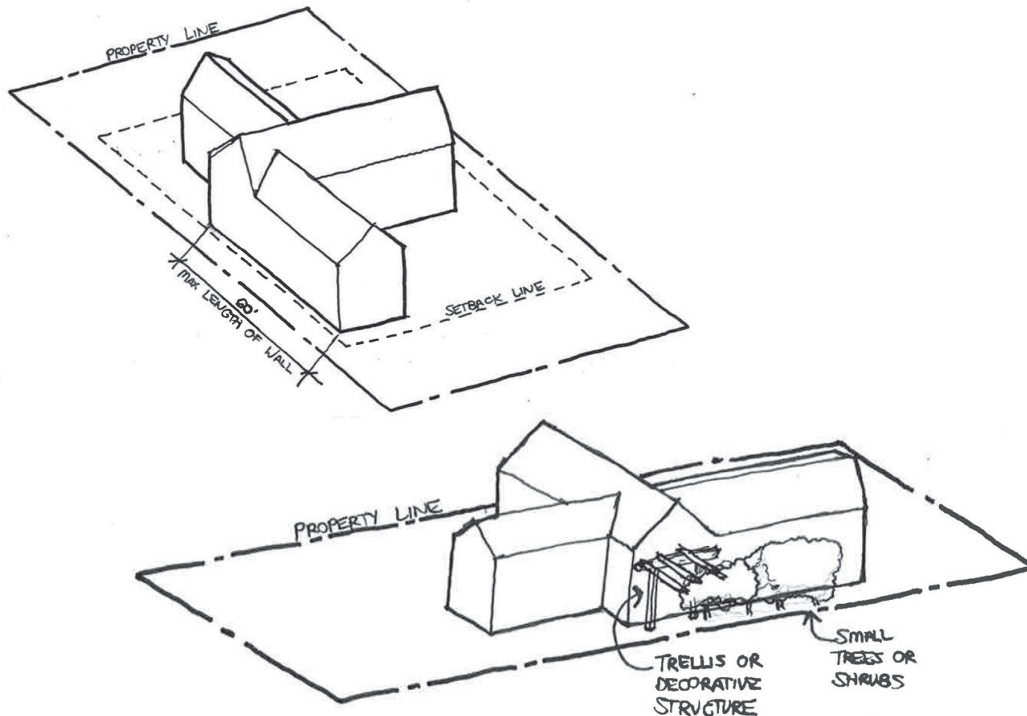
(1) The secondary mass on the side of this house breaks down the scale of the side elevation at the property line. This is a good technique for all lot types in which houses are sited on a side setback line. (2) The side of this house on a corner lot contains a secondary mass on the setback line while the rest of the house is stepped back into the site. (3) This house is sited close to its property edges yet utilizes secondary masses at front (porch) and side. The second floor is built into the roof area which allows this sizable house to diminish in scale and be compatible with the neighboring older houses. (4) The secondary massing elements of this house, consistent with its architectural style, help to break down the scale of the house. Note that the side-loading garage to the right follows the window fenestration of the house, which gives the front elevation a consistent appearance.



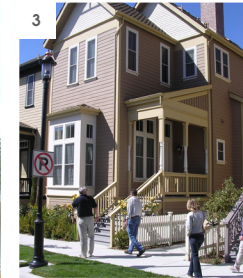
MS-4 Large Wall Planes

Design alternative and functional treatments to break up the continuity of large wall planes.

- Use functional architectural features such as bay windows, chimneys, porches, or decks to reduce the perceived size of large side wall planes.
- Use landscaping and/or trellising to reduce the perceived scale of side wall planes.
- When constructing long two-story houses, step the side elevation back from the property line as much as possible to reduce the impact on privacy to the adjacent lot.



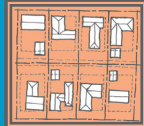
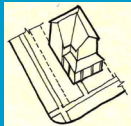
MS-4 (T) Long side wall plane on narrow lot. **(B)** Landscape and trellis wall treatments.



(1) Large side wall and roof plane broken up with trimmed windows and dormers. The accessory structure matches the roof pitch of the primary structure creating compatibility within the site. **(2)** The presence of this chimney and porch break up an otherwise uninteresting side elevation. **(3)** Tall planes are broken up by material changes and porch. Note that this house could be built on large lots provided that the house is set back from the property lines enough. **(4)** The long wall plane of this house is broken up by a projecting bay, an entry porch, and a series of shed roofs between the first and second floors.

PP PRIVATE TO PUBLIC PROPERTY TRANSITION

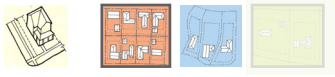
PROVIDE AN APPROPRIATE TRANSITION BETWEEN PRIVATE PROPERTY
AND THE STREET.



Infill design on small traditional grid lots or irregular lots with shallow depths should contribute to a safe and inviting neighborhood character. The transition from private to public property should not be apparent; rather, the elements such as hardscape and landscape should blend. Visual connection between the front of a house and the street will help to create a sense of safety.

On larger lots, the transition from private property to the public way will not always connect to front of the house. However, hardscape paths, driveways, and landscaping can create a sense of connection between the public way and the interior of a large lot.

Overall, the design of the transition should be consistent with the pattern of development in the neighborhood.

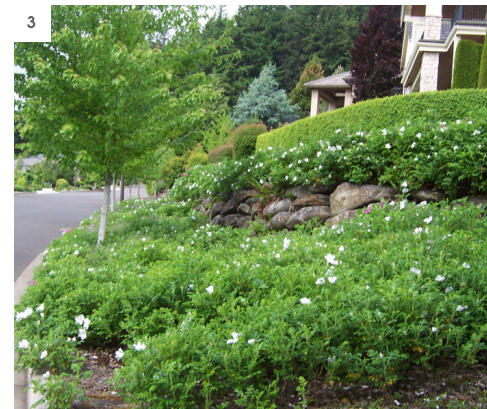


PP-1 Sloped Lots

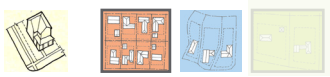
On sloped lots, use a combination of retaining walls and erosion-preventing landscaping to step the lot to the street and/or to neighboring lots.



PP-1 Retaining wall provides clean edge between public and private property.



(1) Terraced retaining walls up to front setback line help prevent erosion and contain stormwater. **(2)** Retaining wall provides clean edge between public and private property. **(3)** This rock wall and shrub treatment retain the sloped site and slow the flow of run-off to the street.



PP-2 Transition Elements

Use effective transition elements such as low masonry walls, low gates or trellises, or steps on sloped lots to define the public – private edge.

PP-3 Connect to the Public Way

Connect the front of a house to the public way through the use of porches, decks, walkways, or other private outdoor spaces.

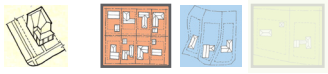
- On traditional grid or small irregular lots, all these elements may be seen together.
- On large lots, tree canopies or topography may buffer the view of a house from the street.



PP-3 This wide flagstone path and stairway present an inviting connection between the street and house.



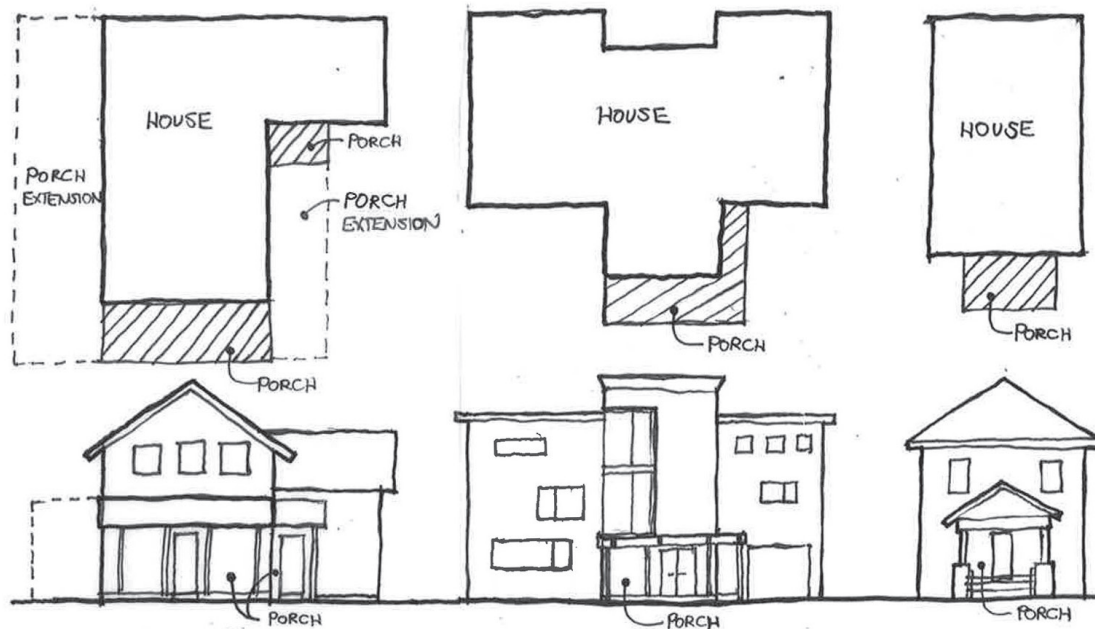
- (1)** This gate serves as a formal transition portal between public and private space. **(2)** This low brick wall serves to define the edge between private and public space. **(3)** Hardscape path constructed from flagstones set in permeable gravel connect the porch to the public street.



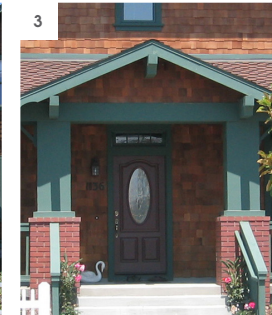
PP-4 Design of Porches

For all lot types, design porches as a detail element that both compliments the overall design and scale of the house and is large enough to accommodate seating.

- The porch should work with window and door patterns and connect the door to a path leading to the street or driveway.
- Size and position of porches should contribute to a compatible streetscape on small grid lots where houses are seen close together.
- When porches are located on the side or rear of houses on small or narrow lots, or close to the property edge on larger sites, they should be designed to minimize their impact upon the privacy of neighboring lots.



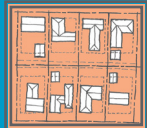
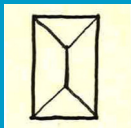
PP-4 Some common porch configurations.



(1) Front porch helps to reduce the apparent scale of the front elevation while functioning as one of the connecting elements between the front door to the street. (2) Raised porch directs visitors to an otherwise obscure front door. This works well for houses containing side entries on small traditional grid lots. (3) Small porch symmetrically frames the front door. (4) This wrap around porch works well for large gatherings and can easily be accommodated on large or corner lots.

RF ROOF FORMS

WHEN DESIGNING THE ROOF PORTION OF A HOUSE, USE ROOF FORMS THAT CREATE ARCHITECTURAL INTEREST AND BREAK DOWN THE PERCEIVED SCALE OF A HOUSE WHEN AMONG NEIGHBORING HOMES.



The roof form(s) of a house can help to identify its style. Careful consideration must be given to the design of roofs. Many neighborhood plans outline recommendations for roof design while other neighborhoods may exhibit patterns of development to guide the design of roof forms. Exaggerated roof forms that are inappropriate to the scale of the house are discouraged. Roofs of houses that contain a unique style can rely on other design cues in the neighborhood such as matching cornice or eave elevations, creating similar roof masses, or using similar finish materials.

Though finished attics count toward floor area, building a floor within the roof of a house will minimize its mass. Adding windowed dormers will bring light into the floor and also can reduce the perceived bulk of the roof.

The aesthetic requirements of roofs must be balanced with their function to effectively shed water.

A good aesthetic roof design minimizes the mass of a house and demonstrates compatibility with neighboring houses.



RF-1 Appropriate to the Style

For all lot types, design the roof forms to be appropriate to the style of the house.

RF-2 Roof Pitches

Design roof pitches to reduce the perceived bulk of the house and to complement neighboring properties.

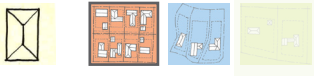
- Vital on small lots and when building near the property line.



RF-1 This Queen Anne uses a style-appropriate conical roof over a corner window bay and a detail embellishment at the top of the gable facing the street.



(1) The bulk of the roof is reduced by the use of multiple dormers which provide a rhythm and align with the space between the columns below. **(2)** The low slope of these secondary roof forms reduce the perceived scale of this large dwelling. **(3)** Secondary roof forms at corner lots present two frontages to the street. The sub-gables, shown here, moderate the scale of the primary roof and increase compatibility with neighboring houses.



RF-3 Secondary Roof Forms

For all lot types, geometry of secondary roof forms should match the roof geometry of the primary roof form in order to create design harmony within the site.

RF-4 Build into the Roof

Finish out the interior of a useable attic created by tall roof forms. Adding windowed dormers will bring light into the floor and can reduce the bulk of the house.

- This is important for small lots because useable square footage is maximized while reducing the overall perceived bulk of the house.



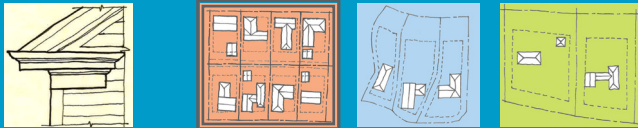
RF-3 Roof of porch matches style and pitch of primary roof.



(1) Projecting front room at ground floor follows roof line and pitch of primary structure. **(2)** Large street-facing shed dormer brings light to this second floor which has been built into the primary gable roof. **(3)** Roof of dormer matches style and pitch of primary roof, creating design harmony within the structure.

MA EXTERIOR FINISH MATERIALS

CONSTRUCT HOUSES WITH EXTERIOR FINISH MATERIALS THAT ARE OF GOOD QUALITY, ARE CONTEXTUAL IN NATURE TO QUALITY NEIGHBORHOOD DEVELOPMENT, AND ARE APPROPRIATE TO THE PACIFIC NORTHWEST.

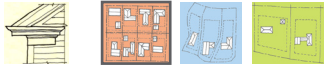


Building materials should function well together. The proper detailing of certain finishes such as painted or stained hardwood trim around wall openings in wood siding or multiple coursing patterns in masonry provides visual interest. For traditional style homes, use good details from older homes in the neighborhood.

Use of building materials such as masonry at the base conveys a sense of permanence. Quality materials show a sense of pride in both the design of the house and in its neighborhood context. Use of poor quality materials causes a house to look cheap and temporary.

Color also provides richness to the design of a house. Color can accenuate detail such as trim around wall openings. It can also be expressive of function such when the color of cladding materials is different than the color of masonry, conveying structural support. The colors of a palette should be complementary to each other.

Study the use of exterior finish materials within the existing neighborhood pattern. Draw from good design seen in the neighborhood to achieve compatibility. In turn, a well designed Infill house will encourage similar quality construction in the neighborhood in the future.



MA-1 Reduce Bulk

Vary materials or masonry coursing as appropriate to reduce the perception of bulk.

- Use eave or cornice accents, knee braces, and belly bands at siding transition locations to create detail.

MA-2 Treatment of Transitions

Locate a transition of materials at inside corners rather than outside corners.



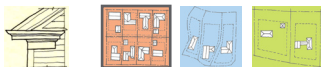
MA-2 Brick finish terminates at inside corner of window bay.



(1) Knee braces provide an additional level of detail at the intersection between the roof and wall plane. Note that the bold color of the trim brings attention to the detailing.

(2) White trim color, heavy material at base, and a shed roof over window all help to add visual interest to this wall plane. **(3)** This brick masonry is properly wrapped around the outside corner and also provides a sense of thickness when seen from the street. **(4)**

Material transition occurs at inside corner.



MA-3 Location of Exterior Finish Materials

Use materials in appropriate locations.

- In masonry construction, express headers and sills at openings such as windows and doors by using a secondary masonry component or through a change in coursing.
- Do not use lighter materials such as siding at the base of a wall with a heavier material such as stone above it.
- Use masonry when it is reflective of the design language of the neighborhood and appropriate for the arch style.

MA-4 Use Local

The use of locally produced materials will likely result in better compatibility with surrounding houses.

- Locally produced materials age better and are more suitable to the local climate.



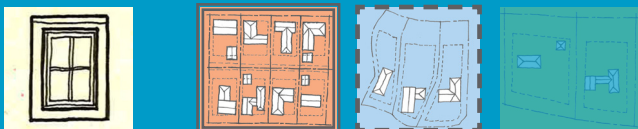
MA-3 Brick used at column base expresses the function of masonry supporting the columns and in turn, the weight of the porch roof above.



(1) The bay window is articulated with siding finish. (2) The change of materials demonstrates functionality: concrete at the foundation and horizontal siding for the cladding. (3) Painted window frame allows for greater visual separation from masonry wall. (4) Window heads are expressed by a secondary masonry coursing creating a focal point in the wall.

OP WALL OPENINGS

ORIENT AND SIZE OPENINGS SUCH AS WINDOWS, DOORS, AND GARAGE DOORS TO COMPLIMENT THE DESIGN AND FUNCTION OF THE HOUSE WHILE RESPECTING THE PRIVACY OF NEIGHBORING LOTS.



Some examples of traditional window and door treatments.

Privacy concerns between neighboring houses have become an important design consideration as houses have been built closer to property lines. Locating window and door openings in ways to respect the privacy of neighboring houses will result in a more livable neighborhood. Locating non-egress windows high on walls allows for privacy while still providing natural light. Exterior doors can be buffered with landscaping or a site-obscuring fence along the property line. The relationship of fences, retaining walls, and landscaping to the privacy of neighbors is discussed elsewhere in this handbook.

The articulation of windows and doors greatly influences the appearance of a house. Careful consideration must be made to both the design and placement of windows and doors while being mindful of their internal functionality. Windows and doors containing a greater amount of ornamentation such as divided lites are more appropriate for a traditional style of house, while minimally detailing openings is appropriate for modern house designs.

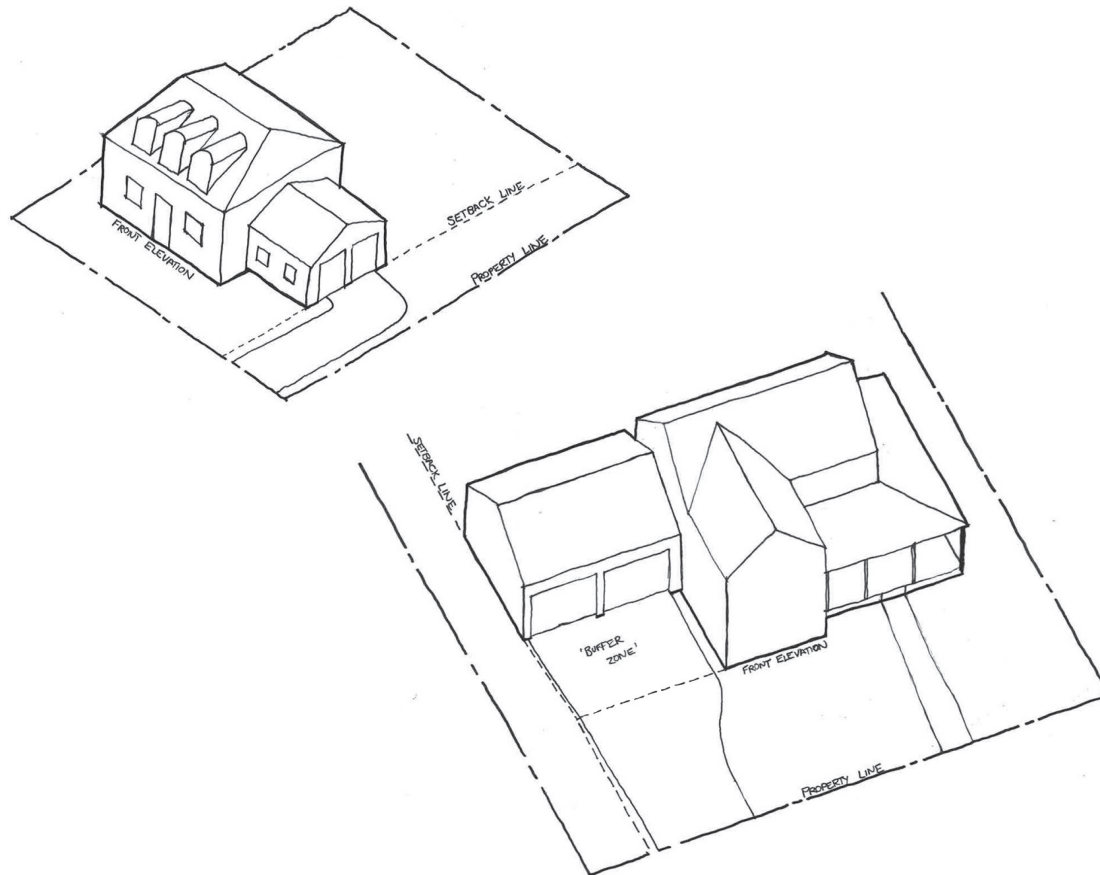
Locate garage doors to minimize their impact on the front elevation, and consequently, the streetscape. The door can be buffered with landscaping or a trellis. On wider lots, it can be oriented away from the street. On large lots and lots with varying topography, the garage can be completely detached from the house or tucked under it. When siting the garage, position it to minimize the size and length of the driveway.



OP-1 Minimize Garage Door Appearance

Locate garages to minimize their impact on the site and on the context of the neighborhood.

- Orient garage doors away from the street on larger or wider lots.
- Set garages back from the front of the house as much as possible.
- Buffer the appearance of garage doors with landscaping or a trellis.



OP-1 (T) Side loading garage shown, typically accommodated on large lots or wide irregular lots, gives front elevation a better street presence. **(B)** Front-loading garages should be set back as far as possible from the front elevation. The area in front of the doors, shown dotted, can contain an additional buffering element such as a trellis.

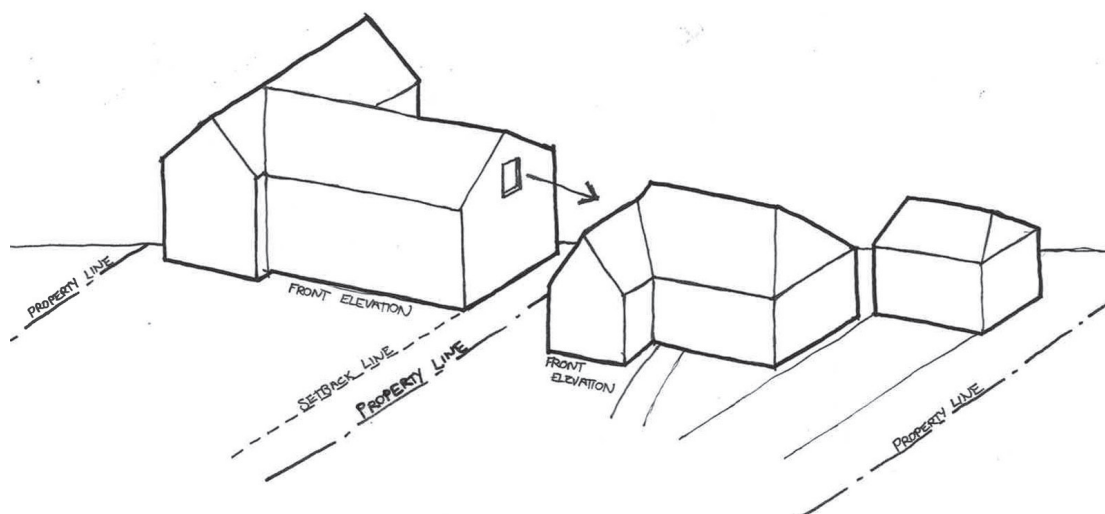


(1) This garage is sited at the back of the house, diminishing its impact on the front elevation. Being connected to the primary structure only at the roof allows for a path to link the front and back of the site. **(2)** On this corner lot, the garage is buffered from the street by an accessory structure seen in the foreground. **(3)** The stained wood finish of this garage door which matches the house helps to diminish the appearance of the garage door.



OP-2 Position Windows

Position windows on second floors to minimize their impact upon the privacy of neighboring rear yards.



OP-2 Avoid the positioning of second floor windows that look directly into a neighbor's house as shown here.



(1) Orient window dormers serving rooms such as bedrooms toward the front or rear of a house rather than to the side facing a neighbor's backyard. (2) When upper floor windows are positioned opposite a sloping roof plane rather than a neighboring window, there is more opportunity for natural light or solar gain. (3) The houses shown here are sited in a non-parallel pattern resulting in windows which do not directly face neighboring houses.



OP-3 Orient the Front to the Street

On small lots, orient the front door and primary elevation to the street. On large lots that are set back from the street, incorporate pathways, lighting and landscaping to foster the relationship between the building and the street.

OP-4 Connect Entry Doors

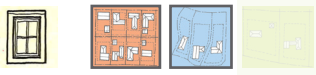
Connect entry doors to site features such as secondary structures, driveways, and patios through the use of transition features like porches, steps, and hardscape or softscape pathways.



OP-4 The pathways in the foreground leading to this grand porch and entry combine to create a strong sense of arrival.



(1) This house on a corner lot orients its front door to the street. **(2)** This house on a large wide lot has a strong street presence as a result of its traditional design features and connectivity from the street to the front door. **(3)** By locating the garage and its access away from the front, this house on a small lot possesses a strong street presence.



OP-5 Use of Trim

When appropriate to the design of a house, use trim to highlight openings on all facades. When use of trim may not be appropriate, properly treat and flash openings to protect them from water intrusion.

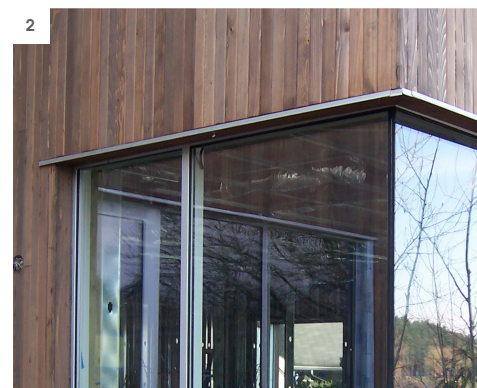
- Accentuate trim to break down the mass of a wall.

OP-6 Shade and Shadows

Accenuate openings with shade and shadows that reflect typical construction practices and techniques.



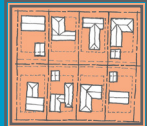
OP-6 These windows, set back in the wall, articulate the depth of the masonry, adding a level of detail.



(1) Contrasting paint color of trim highlights this window. **(2)** Minimal flashing detail at window head is appropriate to this contemporary design. **(3)** Shutters and door surround are all appropriate trim features to the style of this dwelling.

AS ACCESSORY STRUCTURES

ACCESSORY STRUCTURES AND DETACHED GARAGES SHOULD COMPLEMENT THE STYLE OF THE PRIMARY STRUCTURE, BUT BE SECONDARY IN SCALE.



Privacy and the impact on a neighboring lot's access to natural light should be considered when siting and constructing accessory structures. For example, construct accessory structures with second floors within the roof space to reduce the perceived scale of the structure.

Strong connectivity between houses and accessory structures creates a functional site. Construct pathways out of pervious pavers rather than concrete to minimize the impact on the soil. Locate detached garages to minimize the driveway length on both small and large lots. On large lots, there is more opportunity to tuck a detached garage behind the house. Use of similar exterior finish materials is encouraged between primary and accessory structures. Orient windows into the yard rather than a neighbor's yard.

The guidelines below describe how to design accessory structures that are compatible with the primary structure on the site as well as with surrounding structures.



AS-1 Buffer Accessory Structures

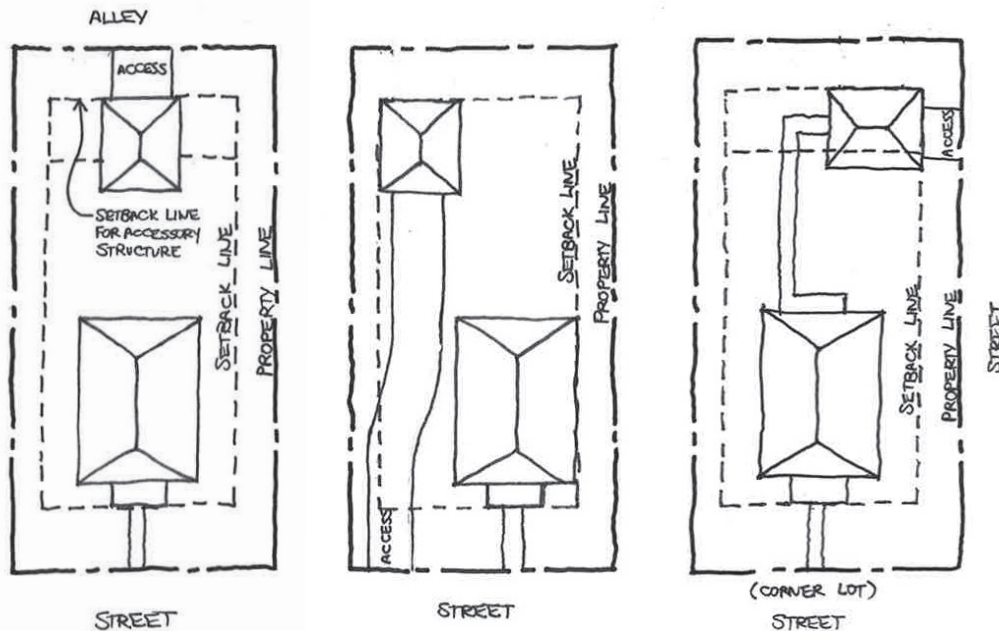
On all lot types, locate and buffer accessory structures to minimize the visual impact upon adjacent lots.

- Buffering strategies can include any combination of landscaping, fencing, or low masonry walls.

AS-2 Respectfully Locate Windows and Doors

Locate window and door openings of accessory structures that are respectful of the privacy of adjacent lots.

- Consider buffering views from windows and doors that face neighboring properties with landscaping.



AS-1 Some common positions of Accessory Structures, in this example, show detached garages with vehicular access either from alleys or the front of the property. The condition on the left is typical for small grid lots. The conditions in the middle and the right are typical for small grid or irregular lots.



(1) This house buffers its own detached garage through the use of a carport. (2) Dormer windows over the detached garage shown here orient toward the street and away from neighbors while presenting a nice additional level of detail to the accessory structure. (3) The accessory structure (left foreground) is buffered from the neighboring lot by landscaping seen to the right.



AS-3 Connect With Site Features

Use hardscape and landscape to connect accessory structures to the primary house and other structures on the lot.

- Orient hardscape paths away from property edges when able to protect privacy.



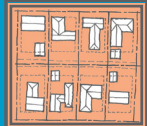
AS-3 This driveway is finished in brick pavers which functions both as a surface to park cars and as a pathway between the accessory garage structure and the house.



(1) This accessory structure is aesthetically connected to the primary house by the surrounding landscape when viewed from the street. **(2)** This alley-loading detached garage on this small narrow lot is connected to the primary house by a walk that is buffered from the neighboring lot by shrubbery, maintaining privacy for both lots. **(3)** Access to detached garage is closed by a decorative gate matching the style of fence at the front of the property.

LF LANDSCAPING, RETAINING WALLS, AND FENCES

USE LANDSCAPE, RETAINING WALLS, AND FENCES TO ARTICULATE PROPERTY EDGES, TO PROTECT EXTERNAL AND INTERNAL PRIVACY, AND TO CONNECT THE HOUSE AND ITS YARD TO THE STREET.



The goal is to strike a balance between maintaining walkable friendly neighborhoods and creating private outdoor spaces. As appropriate, a combination of landscaping, retaining walls, and fences can be installed at the edges of properties to create enclosures to protect pets and children while respecting neighbor to neighbor privacy.



LF-1 Gradually Sloped Lots

On gradually sloped lots, use a combination of retaining walls or erosion-controlling landscape to visually step the slope to the property edge.

LF-2 Open Space

Provide a gentle transition between property edges and adjacent open space where privacy is not essential.



LF-1 A combination of retaining walls and tiered landscaping stabilize the slope of this front yard.



(1) The retaining walls and landscaping of this sloped condition effectively step the lot to the street. **(2)** Transition between private property to the right and open space to the left is marked with a fence and shrub line, the latter blocks the view of the fence when viewed from the open space. **(3)** The line of demarcation between private property and open space—the edge of the driveway—is not apparent.



LF-3 Low Scale Edge Treatment for Narrow Lots

On property lines between small narrow lots, use short edge defining walls, fences, or landscaping to maximize penetration of natural light to the side yards while maintaining a consistency of scale.

- The height of the edge-defining features should not cause side yards to feel enclosed or to prevent the penetration of natural light.

LF-4 Site-Obscuring Landscaping

Use site-obscuring landscape elements to screen transformers and other site utilities from the public view for all lot types.



LF-3 Two edge conditions border this public path: a landscape edge treatment which also buffers the view of the side elevation of the house, and a painted wood fence for privacy or containment.



(1) This short retaining wall between narrow lots reflects the scale of the space and allows the space between each house and the wall to not feel narrow. **(2)** Both a landscape edge and a fence edge are seen along this pedestrian path. **(3)** Shrubbery helps buffer the view of utility equipment from the street. **(4)** Formal landscape planting can soften a property edge.



LF-5 Soften the Edge

Use landscape elements such as shrubs and/or small trees at side property lines rather than fences in order to soften edge conditions.



LF-5 Soft landscape edges border each side of this public path.



(1) Ornamental trees and shrubs (when mature) can provide a sufficient visual buffer of this window from the adjacent neighbor's driveway without the need for a fence.

(2) This site obscuring shrub line adjacent to the neighbor's driveway is a softer alternative to a fence or retaining wall.

(3) Mature landscaping can easily buffer views across property lines while masking the property edge.

APPENDIX

INFILL DESIGN HANDBOOK

Applicable Infill Code

The following lists the general Infill standards that apply to each Design Principle:

TS TOPOGRAPHY OF SITE

- Height of Structures and exceptions
- Lot Coverage
- Floor Area
- Yard Setbacks and exceptions
- Front and Side Setback Planes

MS MASSING AND SCALE

- Height of Structures and exceptions
- Lot Coverage
- Floor Area
- Yard Setbacks and exceptions
- Front and Side Setback Planes
- Long Wall Planes

PP PRIVATE TO PUBLIC PROPERTY TRANSITION

- Yard Setbacks and exceptions
- Garage Appearance and Location
- Front Porches (R-6)
- Street Trees (R-6)
- Alley Access (R-6)
- Lot Configuration and Access (Flag Lots)

RF ROOF FORMS

- Height of Structures and exceptions
- Floor Area
- Yard Setbacks and exceptions
- Roof Design and Pitch (R-6)

MA EXTERIOR FINISH MATERIALS

- Garage Appearance and Location

OP WALL OPENINGS

- Yard Setbacks and exceptions
- Garage Appearance and Location
- Front Porches (R-6)
- Lot Configuration (Flag Lots)

AS ACCESSORY STRUCTURES

- Height of Structures and exceptions
- Lot Coverage
- Floor Area
- Yard Setbacks
- Accessory Structure Design (R-6)

LF LANDSCAPING, RETAINING WALLS, AND FENCES

- Yard Setbacks and exceptions
- Screening, Buffering, and Landscape Installation (Flag Lots)

The design of Infill houses is subject to the following chapters of the Community Development Code of the City of Lake Oswego:

- LOC 50.04.003 Exceptions, Projections, and Encroachments
- LOC 50.05.001 Glenmorrie R-15 Overlay District
- LOC 50.05.002 Evergreen R-7.5 Overlay District
- LOC 50.05.003 Lake Grove R-7.5/R-10 Overlay District
- LOC 50.05.006 Old Town Neighborhood Design
- LOC 50.06.001.2 Structure Design – Residential Zones
- LOC 50.06.001.3 R-6 Residential Zone Additional Requirements
- LOC 50.06.001.4 Garage Appearance and Location
- LOC 50.07.007.2 Flag Lots
- LOC 50.11.003 Appendix C - Old Town Styles Description
- Related Chapter 50 Appendices

CITY OF LAKE OSWEGO PLANNING AND BUILDING DEPARTMENT

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