

6 Building Design Toolbox

6.0 Introduction

6.0.1 Purpose

The Building Design Toolbox provides direction in the ways that each building contributes to the pedestrian environment. While the individual building designs will vary according to uses, owners, and economic conditions, the overall goals and objectives of the Highway 99 Sub-Area Plan are implicit in the guidance of these building design standards.

The concepts behind the regulations are intended to create:

- Human scale of buildings through articulation, modulation, and details. (see Section 6.1-6.2)
- A consistent pedestrian environment, where gaps like blank walls are avoided. (see Section 6.4)
- Corners that are inviting to pedestrians or mark gateways to activity centers. (see Section 6.5)

6.0.2 Applicability

Applicability: The standards in this chapter apply to all non-residential and multifamily development unless otherwise noted herein.

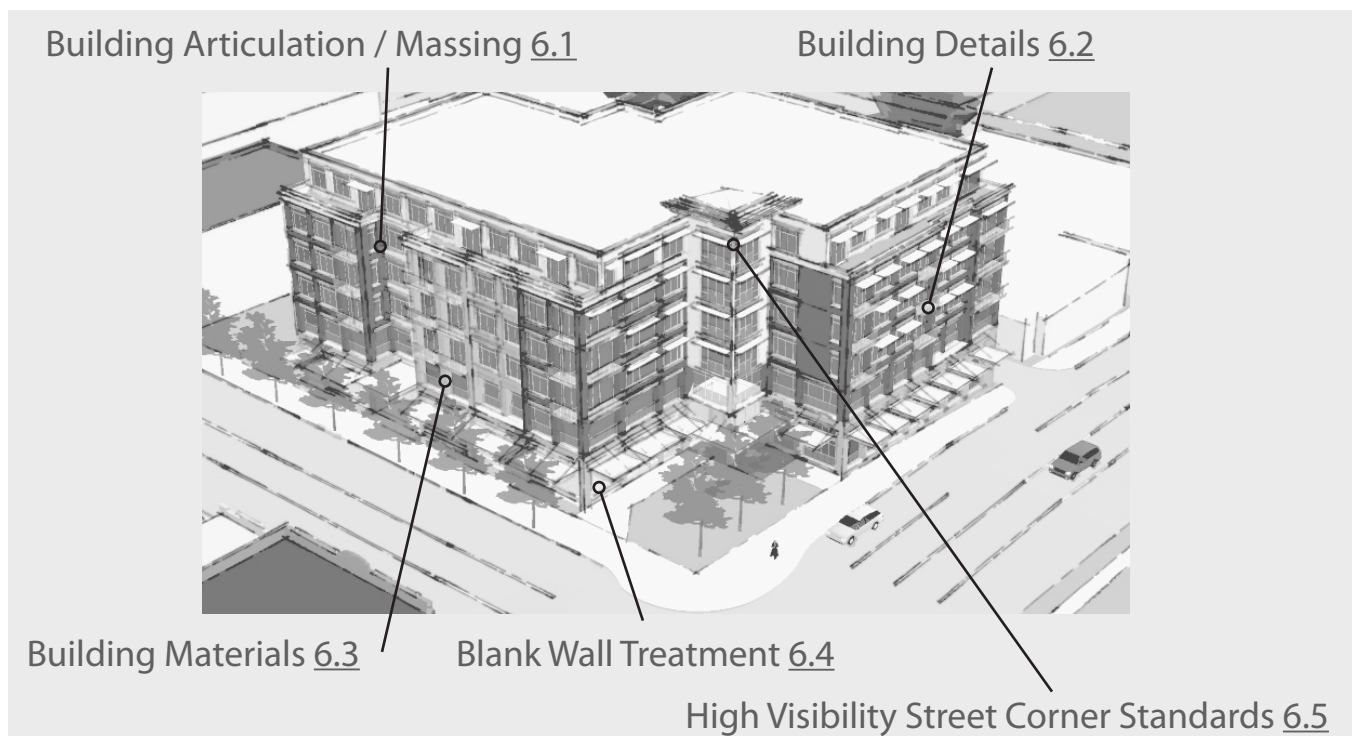


Figure 6-1. Example development within an Activity Center, incorporating site design elements found in this chapter.

6.1 Building Articulation and Massing

INTENT

- To reduce the scale of large buildings and add visual interest.
- To encourage architectural design that contributes to the pedestrian environment.

6.1.1 Storefront Articulation Checklist

Building façades on Storefront Streets and all other façades adjacent to public sidewalks shall include articulation features every 40 feet to create a pattern of small storefronts.

At least two of the following articulation methods must be employed at intervals no greater than 40 feet:

- Use of window and/or entries that reinforce the pattern of small storefront spaces.
- Use of weather protection features that reinforce small storefronts. For example, for a business that occupies 120 feet of frontage, use three separate awnings to break down the scale of the storefronts.
- Change of roofline per Standard 6.1.4.
- Placement of building columns or vertical piers that reinforce a small storefront pattern.-
- Change in building material or siding style.
- Other methods that meet the intent of the standards.

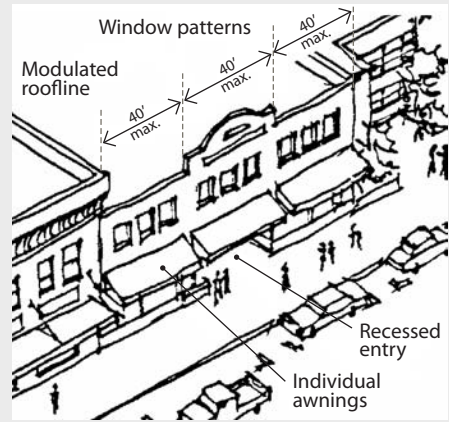


Figure 6-2. This building uses distinct window patterns, separate awnings, and roofline modulation at 40-foot intervals.



Figure 6-3. This building uses distinct window patterns, vertical piers, and separate awnings to articulate the façade (Bend, OR).



Figure 6-4. This building is designed to look like several small buildings, each with a distinct façade (Juanita, Kirkland, WA)



Figure 6-5. No substantial façade articulations.

6.1.2 Façade Articulation Checklist - Other Non-Residential

All other non-residential building façades containing a public entry and/or facing a street, park, or pedestrian-oriented space must include articulation features every 60 feet to provide visual interest and reduce the perceived scale of large buildings.

At least three of the following articulation methods must be employed at intervals no greater than 60 feet:

- Window patterns and/or entries that reinforce the pattern of storefront spaces; e.g., groups of windows that repeat no more than every 60 feet as opposed to a uniform row, or “ribbon,” of windows.
- Weather protection features that reinforce storefronts. For example, for a building façade that is 180 feet wide, use three separate awnings to articulate the façade.
- Change of roofline as described per Standard 6.1.4.
- Providing vertical building modulation of at least two feet in depth and four feet in width if tied with a change in roofline as described in Standard 6.1.4 below or change in building materials or siding style. Otherwise, the minimum depth and width of the modulation shall be 10 and 20 feet, respectively.
- Placement of building columns or vertical piers that reinforce a storefront pattern.
- Change in building material or siding style.
- Vertical elements such as planters, art pieces, or other features that repeat at intervals of 60 feet or less.
- Design that features a top, middle, and bottom. This typically includes a distinctive ground floor or lower floor design, consistent articulation of middle floors, and a distinctive roofline. The articulation interval does not apply to this option.
- Other methods that meet the intent of the standards.-

Exemptions: Service station canopies and developments in the Light Industrial zone (not including buildings on the NE 78th Street Property) are exempt from these standards unless otherwise noted.

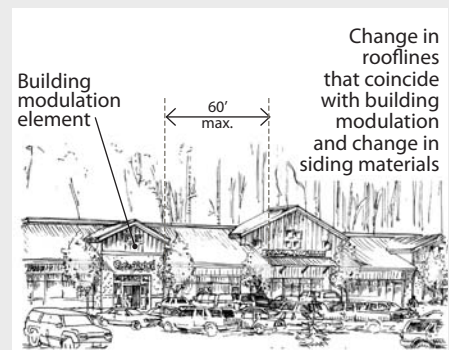


Figure 6-6. Façade articulation example.



Figure 6-7. Storefront window patterns, vertical modulation and material changes are effectively used on this façade (Bellevue, WA).



Figure 6-8. The change in roofline combined with the vertical modulation along the façade make this an acceptable design (Bellevue, WA).



Figure 6-9. With a flat façade and single roofline, this development example does not meet the articulation requirements.

6.1.3 Multifamily Buildings Articulation Checklist

Residential buildings and residential portions of mixed-use buildings shall include at least three of the following modulation and/or articulation features at intervals of no more than 30 feet along all façades facing a street, park, common open space, and common parking areas:

- Repeating distinctive window patterns at intervals of 30 feet or less.
- Vertical building modulation. Minimum depth and width of modulation is 18 inches and four feet, respectively, if tied to a change in color or building material and/or roofline modulation as defined in Standard 6.1.4. Otherwise, the minimum depth and width of modulation is 10 and 15 feet, respectively. Balconies may be used to meet the modulation if they are recessed or projected from the façade by at least 18 inches.
- Change of roofline, as described per Standard 6.1.4.
- Horizontal modulation (upper level step-backs).
- Articulation of the building's top, middle, and bottom. This typically includes a distinctive ground floor or lower floor design, consistent articulation of middle floors, and a distinctive roofline. The articulation interval does not apply to this option.
- Building elements such as bay windows, porches, canopies, chimneys, or other repetitive feature that effectively articulates the façade.
- Other methods that effectively reduce the perceived scale of the building and add visual interest.



Figure 6-10. An example sketch of a multi-story building that meets the articulation standards.



Figure 6-11. This building uses projecting balconies, roofline modulation, and repeating window patterns (White Rock, BC).



Figure 6-12. This building uses vertical building modulation (recessed balconies), repeating windows, and a distinctive top/middle/bottom (Mercer Island, WA).



Figure 6-13. Roofline modulation alone does not help this building to meet articulation standards.

6.1.4 Roofline Modulation Checklist

In order to qualify as an articulation feature in Standards 6.1.1-6.1.3, rooflines must be varied by emphasizing dormers, chimneys, stepped roofs, gables, prominent cornice or wall, or a broken or articulated roofline.

Modulation shall consist of one of the following:

- For flat roofs or façades with horizontal eave, fascia, or parapet, the minimum vertical dimension of roofline modulation is the greater of 2 feet or 0.1 multiplied by the wall height (finish grade to top of the wall) when combined with vertical building modulation techniques described in Standards 6.1.2 and 6.1.3 above. Otherwise, the minimum vertical dimension of roofline modulation is the greater of 4 feet or 0.2 multiplied by the wall height.
- A pitched roofline or gabled roofline segment of at least 20 feet in width. Buildings with pitched roofs must include a minimum slope of 5:12 and feature modulated roofline components at the interval required per the applicable standard above.
- A combination of the above.



Figure 6-14. Roofline modulation example (Issaquah, WA).



Figure 6-15. A combination of flat and pitched rooflines (Woodinville, WA).

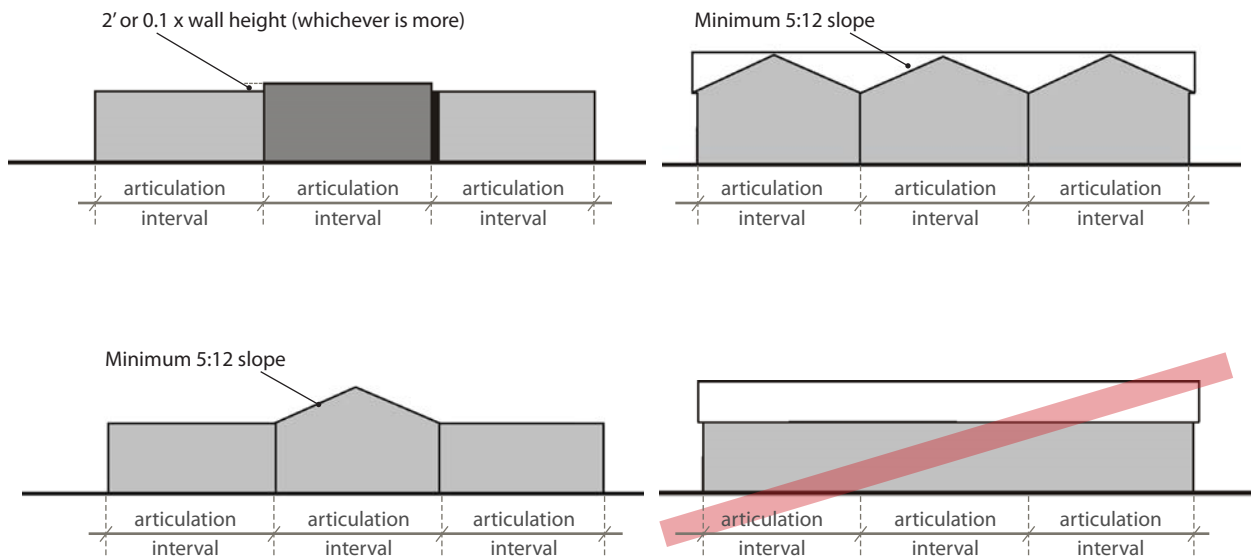


Figure 6-16. These comparisons of rooflines express the difference between what is and is not acceptable within these standards.

6.1.5 Massing of Large-Scale Retail Uses

Standards herein are applicable to individual retail uses with at least 50,000 square feet of floor area and façades greater than 150 feet in width.

(1) Prominent entry. The storefront shall integrate a prominent entry feature combining substantial roofline modulation with vertical building modulation and a distinctive change in materials and/or colors.

(2) Roofline modulation. The minimum vertical dimension of roofline modulation (required above) is the greater of 6 feet or 0.3 multiplied by the wall height (finish grade to top of the wall).

(3) Façades wider than 300 feet shall incorporate at least two entry/articulation features (if there is only one entry, the second feature may be less prominent).

Departures: see Standard 6.1.7 for criteria for departures to this standard.

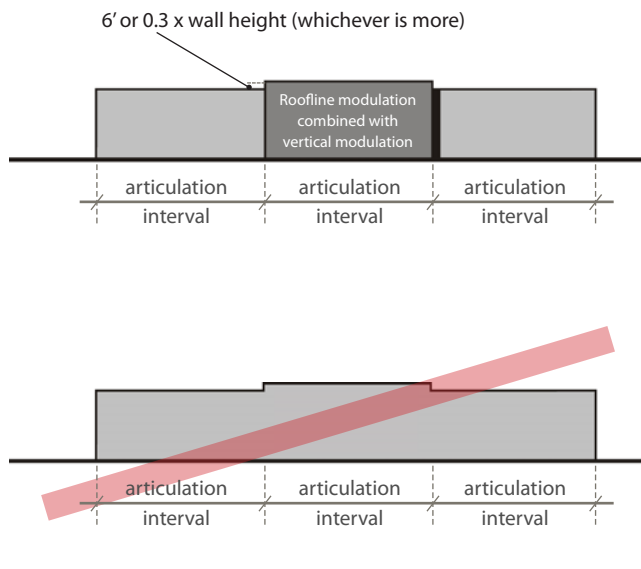


Figure 6-20. Modulation standards for large-scale retail buildings.



Figure 6-17. This prominent entryway projects into the sidewalk (Woodinville, WA).



Figure 6-18. This large scale retail space entryway reaches out to the pedestrian space (Bellevue, WA).



Figure 6-19. This building has a simple, prominent entryway with a pitched roof, and distinctive use of materials and colors (Monroe, WA).

6.1.6 Maximum Façade Width Checklist

For most buildings, small-scale façade articulation features are sufficient to contribute to the pedestrian-oriented environment and add visual interest. Larger buildings need more substantial modulation features to break up the massing and add visual interest.

Façades wider than 120 feet shall include at least one of the following features to break up the massing of the building:

- (a) Provide vertical building modulation at least 20 feet deep and 30 feet wide. For two-story buildings with Storefront frontage, the modulation must extend through the upper floor of the building. For multi-story buildings with any frontage, the modulation must extend through more than one-half of the building floors.
- (b) Use of a contrasting vertical modulated design component featuring all of the following:
 - (i) Component extends through all floors above the first floor fronting on the street. Upper floors that are stepped back more than 10 feet from the façade are exempt.
 - (ii) Utilizes a change in building materials that effectively contrasts from the rest of the façade.
 - (iii) Component is modulated vertically from the rest of the façade by an average of 6 inches.
 - (iv) Component is designed to provide roofline modulation per Standard 6.1.4.
- (c) Façade employs building walls with contrasting articulation that make it appear like two distinct buildings. To qualify for this option, these contrasting façades must employ all of the following:
 - (i) Different building materials and/or configuration of building materials per Standard 6.3.
 - (ii) Contrasting window design (sizes or configurations).

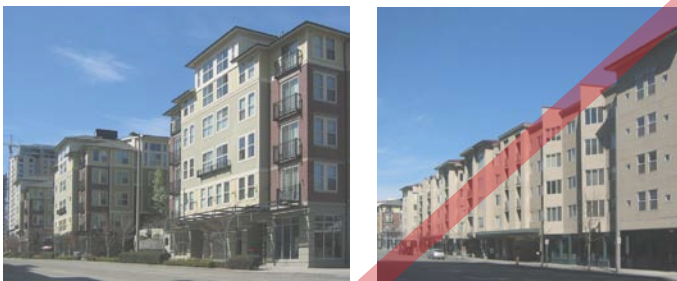


Figure 6-24. Street front courtyards break up the massing of this Bellevue mixed-use building (left). The older mixed-use building (right), uses small-scale modulation features, but more substantial modulation is needed to effectively break up the massing.

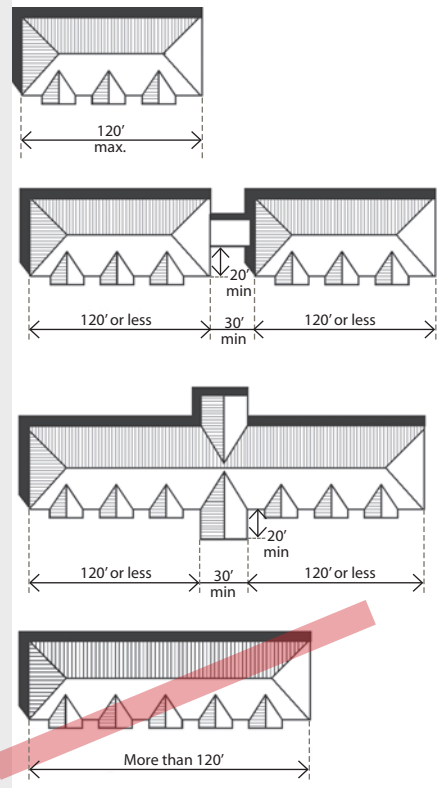


Figure 6-21. Maximum façade width standards.



Figure 6-22. The leaning glass wall in the middle of the upper floors effectively breaks up the massing of this façade (Seattle, WA).



Figure 6-23. Contrasting articulation make this look like three different buildings (Mercer Island, WA).

6.2 Building Details

INTENT

- To encourage the incorporation of design details and small-scale elements into building façades that are attractive at a pedestrian scale.

6.2.1 Details Toolbox for Non-Residential and Mixed-use Façades

The façades of non-residential and mixed-use buildings shall employ at least one detail element from each of the three categories below for each façade facing a public street or private internal access road and containing a public entry.

Detail elements shall be featured at 30-foot intervals along designated Storefront Streets and 60-foot intervals for all other applicable façades. For example, a large building with multiple storefronts will likely need more than one decorative sign, one transom window, and one decorative kick-plate to meet the standards.

(1) Window and/or entry treatment:

- Display windows divided into a grid of multiple panes.
- Transom windows.
- Roll-up windows/doors.
- Other distinctive window treatment that meets the intent of the standards.
- Recessed entry.
- Decorative door.
- Arcade.
- Landscaped trellises or other decorative element that incorporates landscaping near the building entry.
- Other decorative or specially designed entry treatment that meets the intent of the standards.



Figure 6-25. This building uses a decorative arcade, steel canopies, custom light fixtures, and a distinctive mix of materials. (Vancouver, WA)



Figure 6-26. This local building (Center Square) uses decorative materials, lighting, transom windows, and a steel canopy.



Figure 6-27. This building uses decorative materials, windows, lighting, and canopies. The Year of Construction plaque is also a nice detail (Juanita, Kirkland, WA).

(2) Building elements and façade details:

- Custom-designed weather protection element such as a steel or glass canopy, cloth awning, or retractable awning.
- Decorative, custom hanging sign(s).
- Decorative building-mounted light fixtures.
- Bay windows, trellises, towers, and similar elements.
- Other details or elements that meet the intent of these standards.

(3) Building materials and other façade elements:

- Decorative building materials/use of building materials. Examples include decorative use of brick, tile, stonework, or pre-cast concrete.
- Artwork on building (such as a mural) or bas-relief sculpture.
- Decorative kick-plate, pier, beltcourse, or other similar feature.
- Hand-crafted material, such as special wrought iron or carved wood.
- Other details that meet the intent of the standards.



Figure 6-28. This façade uses a roll-up door, steel canopy, and decorative lighting (Portland, OR).



Figure 6-29. This façade uses a decorative door, windows, materials, blade sign and a retractable awning (Seattle, WA).



Figure 6-30. The tile work would marginally qualify as a detail, but the simple wood canopy would not and no other features here would qualify as a detail.

6.2.2 Details Toolbox for Multifamily Buildings

All multifamily building façades containing the building/unit's primary pedestrian entrance shall be enhanced with appropriate details. Each of the types of details listed below are worth one point unless otherwise noted.

Multifamily building façades must achieve the equivalent of four points worth of architectural details. Detail options:

- Decorative porch or entries with distinct design and use of materials.
- Decorative molding/ framing details around all ground floor windows and doors, bay windows, decorative glazing, or door designs, and/or unique window designs.
- Landscaped trellises or other decorative element that incorporates landscaping near the building entry or entries.
- Decorative light fixtures with a diffuse light source for each building entry.
- Brick or stonework covering more than 10 percent of the façade (2 points).
- Decorative building materials employing one of the following:
 - (i) Decorative moldings, brackets, wave trim or lattice work.
 - (ii) Decorative brick or stonework.
 - (iii) Other materials with decorative or textural qualities as approved by the Responsible Official.
- Decorative roofline design, including multiple gables and/or dormers or other design that adds visual interest.
- Decorative railings, grill work, or terraced landscape beds integrated along the façade of the building.



Figure 6-31. These townhomes use a decorative terrace frontage plus decorative windows, materials, and roofline treatment (Vancouver, BC).



Figure 6-32. These townhomes use brick, decorative windows, and a decorative entry design (Issaquah, WA).



Figure 6-33. This building uses a decorative entry design plus decorative materials, windows, and roofline treatment (Redmond, WA).



Figure 6-34. No features on this building would qualify as a detail.

6.2.3 Secondary Public Access for Commercial Buildings

Whereas these standards encourage (and sometimes require) businesses to front on streets rather than parking lots, a large number of customers use the “secondary” entry off of a parking lot. Such businesses that have secondary public access shall comply with all of the following measures:

- (1) Weather protection at least 3 feet deep is required over each secondary entry.
- (2) A sign may be applied to the awning provided that the sign complies with other regulations and guidelines.
- (3) There must be at least two foot-candles illumination **at** the ground surface.
- (4) At least one of the design elements noted in Standard 6.2.1 above must be incorporated within or adjacent to the secondary entry.
- (5) A transparent door or window is required.



FRONT



BACK

Figure 6-35. An example of acceptable secondary entries (Snoqualmie, WA).



Figure 6-36. Weather protection would improve this secondary entrance.



Figure 6-37. An example of recessed windows.



Figure 6-38. An example of trimmed windows.



Figure 6-39. An example of unacceptable window design.

6.3 Building Materials

INTENT

- To encourage high-quality building materials that enhance the character of the area.
- To discourage poor materials with high life-cycle costs.
- To encourage the use of materials that reduce the visual bulk of large buildings.

6.3.1 Metal Siding Standards¹

Masonry, concrete, or other durable material must be incorporated between metal siding and the ground plane (at least 2 feet above grade).

6.3.2 Concrete Block Standards¹

When used for the primary façade (containing the primary pedestrian entrance), buildings are encouraged to incorporate a combination of textures and/or colors. For example, combining split or rock-façade units with smooth blocks can create distinctive patterns.

Specifically, a singular style and texture of concrete block may comprise no more than 50 percent of a façade facing a street or open space.

6.3.3 Stucco Standards¹

(1) Proper trimming. Stucco and similar troweled finishes (including Exterior Insulation and Finish system or “EIFS”) must be sheltered from extreme weather and are limited to no more than 50 percent of façades containing a customer or resident entry.

(2) Treatment near ground level. Stucco, EIFS, and similar surfaces should not extend below 2 feet above the ground plane. Concrete, masonry, or other durable material must be used below the 2-feet-above-grade line.

¹ Departures will be considered to the above Building Materials standards provided the use of materials and the façade design meets the intent of the standards.



Figure 6-40. This building uses an acceptable combination of metal siding, concrete block and wood shingles (Duvall, WA).



Figure 6-41. An example of an acceptable mix of smooth and split-faced concrete blocks (Bellevue, WA).



Figure 6-42. This building employs a single type of concrete block, but it comprises less than 50% of the façade (Snoqualmie, WA).



Figure 6-43. This building combines stucco and concrete block.

6.3.4 Prohibited materials

The following materials are prohibited:

- (1) Mirrored glass covering more than 10 percent of a façade.
- (2) Chain-link fencing. Exceptions: Green or black vinyl covered chain link fencing may be used for parks, recreational uses, nurseries, and other uses requiring outdoor storage. Standard chain link fencing may be used for temporary construction purposes.
- (3) Back-lit vinyl awnings used as signs.



Figure 6-44. Acceptable use of stucco and concrete block. Note how concrete base is used for stucco portions of the façade (Mill Creek, WA).



Figure 6-45. Masonry or concrete would be required within 2 feet of ground for this metal sided storefront.



Figure 6-46. Stucco covering more than 50 percent of the façade is prohibited.

6.4 Blank Wall Treatment

INTENT

- To avoid blank walls that degrade the pedestrian and visual environment of the neighborhood
- To promote design treatments that add visual interest to blank walls

6.4.1 Blank Wall Definition

A wall (including building façades and retaining walls) is considered a blank wall if: A ground floor wall or portion of a ground floor wall over 6 feet in height has a horizontal length greater than 15 feet and does not include a transparent window or door with glazing; or any portion of a ground floor wall having a surface area of 400 square feet or greater does not include a transparent window or door with glazing.

6.4.2 Blank Wall Standards

(1) Untreated blank walls visible from a street, customer parking lot, park, common open space, or pedestrian pathway are prohibited.

(2) Methods to treat blank walls can include:

- (a) Display windows at least 18 inches deep and integrated into the façade (tack on display cases don't qualify).
- (b) Landscape planting bed at least 5 feet wide or a raised planter bed at least 16 inches high and 3 feet wide in front of the wall with planting materials that are sufficient to obscure or screen at least 75 percent of the wall's surface within three years. The landscaping must be combined with other features such as sculpture or other permanent art installation.
- (c) A vertical trellis in front of the wall with climbing vines or plant materials.

(3) Firewalls along property lines are exempt from the above standards, but where they are visible to the public, they shall include horizontal and/or vertical banding or other design treatments.

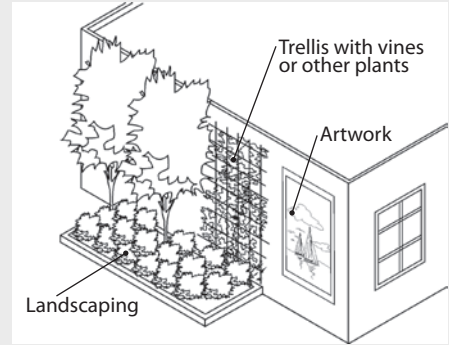


Figure 6-47. Blank wall treatment example.



Figure 6-48. Elevated planter and trellis add interest to an otherwise blank wall.



Figure 6-49. Acceptable fire wall design.

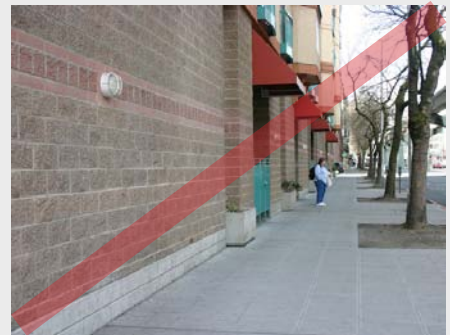


Figure 6-50. Unacceptable blank wall.

6.5 High Visibility Street Corner

INTENT

- To enhance the character and identity of the sub-area and individual activity centers within the sub-area.
- To enhance the pedestrian environment at street corners.

6.5.1 Street Corner Site Design Options

All development proposals located at designated high visibility street corner sites shall include at least one of the design treatments described below:

- Locate a building within 15 feet of the street corner.
- Provide pedestrian-oriented space (at least 200 square feet) at the corner leading directly to a building entry or entries.
- Install substantial landscaping adjacent to the street corner outside the line-of-sight visual triangle. The subject area must be 900 square feet of ground surface area with a combination of trees, shrubs, perennials, and ground cover that provides four-season interest.
- Signs that denote the name of the area/activity center are encouraged. Business signage located outside of the street corner landscaped area shall be located and designed to avoid visual competition with the corner design element.



Figure 6-51. The symbol indicating where a designated High Visibility Street Corner is located on the regulatory maps in Chapter 2.

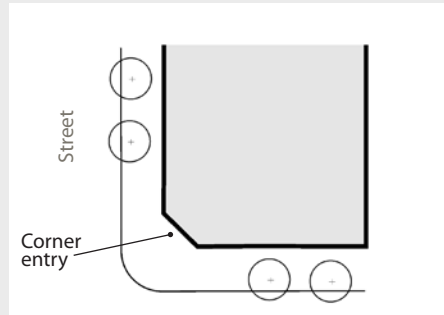


Figure 6-52. Building placed up to the street corner with entry

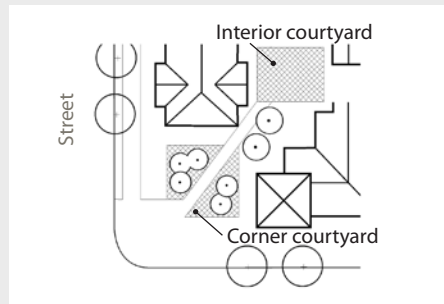


Figure 6-53. Pedestrian-oriented space adjacent to the corner.

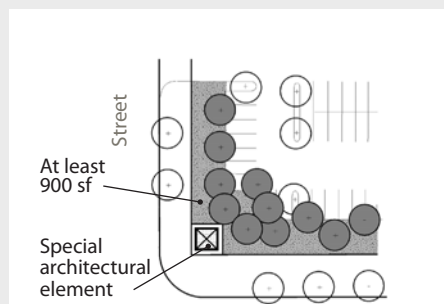


Figure 6-54. Substantial landscaping adjacent to the corner.

6.5.2 Street Corner Building Design Standards

Buildings located within 30 feet of the street corner shall provide one or more of the elements listed below on the building corner:

- A cropped or curved building corner with pedestrian entry.
- A bay window or turret.
- A clock or bell tower.
- Balconies above the ground floor.
- Sculpture or artwork element.
- Distinctive use of façade materials.
- Other special or unique corner building treatment, other than the use of fabric or vinyl awnings, for pedestrian weather protection at the corner of the building.

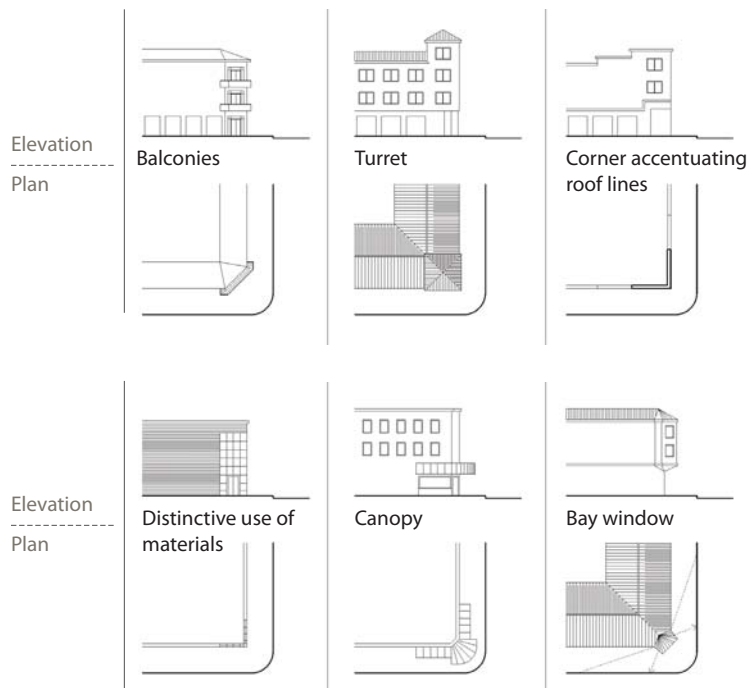


Figure 6-59. Acceptable corner treatments in both elevation and plan.



Figure 6-55. Building with cropped corner and small corner pedestrian space.



Figure 6-56. A turret-like feature with corner canopy and cropped entry (Kirkland, WA).



Figure 6-57. A cropped corner entry with distinctive materials and balcony (Bend, OR).



Figure 6-58. A street corner plaza (Bainbridge Island, WA).