4. BUILDING DESIGN: GENERAL

4.01 BUILDING STYLES

Piedmont has an eclectic range of residential building styles. Viewed from the street within any neighborhood, there are rarely two adjacent homes that look alike. House sizes can vary greatly, depending upon the lot size, the date of original construction and the topography of the property. To retain a building's architectural integrity, it is important to first recognize the special qualities of its specific building style prior to considering a design modification. It is equally important to understand the prevailing neighborhood character, determined by the characteristics of the different building styles, prior to the construction of new single-family homes, multi-family dwellings or mixed-use commercial buildings. The following are some of the many distinct building styles that can be found in Piedmont.[1]

Colonial Revival:
Symmetrical balanced windows framing a centered front door.

Cottage:
Low or intermediate pitched roof with minimal architectural detail.

[1] To further understand the specific qualities of building styles, the reader is advised to consult **A Field Guide to American Houses** by Virginia Savage McAlester. Alfred A. Knopf, 2017

Craftsman:
Low pitched gable roof with deep overhangs and exposed roof rafters.

Dutch Colonial:
Gambrel style roof with balanced divided lite windows.

Midcentury Modern:
Simple or flat roof with large expanses of glass and one exterior wall material.

Mission:
Low pitched tile roof, arched openings, prominent entry portal.

Monterey Colonial:
Shallow roofs, exposed wood rafters, second floor veranda with railings.

Neoclassical:
Columned entry porch with balanced divided lite windows.

New Traditional Multi Family:
Complex high pitched roofs with tall entry features.

Prairie:
Low pitched hip roof, symmetrical entry and window placement.

Spanish Revival:
Low pitched tiled roof, little or no overhang, deeply recessed windows and doors.

Spanish Revival – Civic:
Low pitched tiled roof, little or no overhang, tower or special design element.

Spanish Revival – Commercial:
Low pitched tiled roof, minimal detailing, recessed entry.

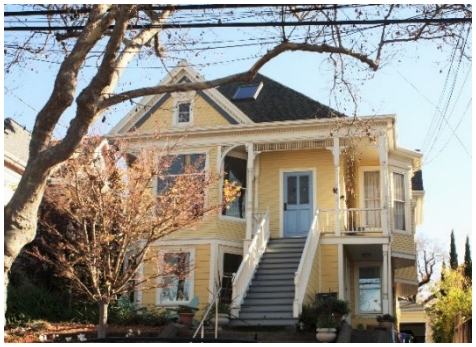
Split Level:
Tri-level with intersecting roofs with asymmetrical windows and entry.

Styled Ranch-Colonial Revival:
Prominent hip or gable roof, revival styled walls, windows and details.

Styled Ranch-Asian:
Low pitched roof with deep overhangs, exposed rafters; walls of wood and stucco.

Tudor:
Steeply pitched gable roofs, walls of stucco, stone and half-timbered wood.

Twenty-First Century Contemporary:
Orthogonal volumes with different wall textures or materials creating a sculptural effect.



Victorian Queen Anne:
Steeply pitched roofs with highly stylized wood details.

DESIGN OBJECTIVES:

1. Encourage creativity and innovation in building design
   Ref: General Plan Design and Preservation Element Policy 28.12
2. Preserve and conserve historically significant resources.
   Ref: General Plan Design and Preservation Element Policy 31.2
3. Ensure the use of appropriate materials for the repair, maintenance or expansion of historic structures.
   Ref: General Plan Design and Preservation Element Policy 31.3
4. Encourage the adaptive reuse of existing buildings, rather than their demolition.
   Ref: General Plan Design and Preservation Element Policy 31.7
5. Anticipate recognizing and preserving structures from the recent past; those built between 1945-1960.
   Ref: General Plan Design and Preservation Element Policy 31.9
6. Achieve design compatibility between additions, remodeling and other new construction by establishing development standards.
   Ref: Ref: Zoning Ordinance Sec. 17.20.010

The following guidelines apply to discretionary design review permit applications.

4.01.01 PREDOMINANT BUILDING STYLE

DESIGN GUIDELINES: ON-SITE DESIGN COMPATIBILITY

Guidelines 1-4 apply to all additions and alterations to existing structures:

1. Where an existing structure is a hybrid of two styles (example: craftsman and prairie styles), the construction should continue this hybrid aesthetic.

2. Where an existing structure consists of an original building constructed in one architectural style and an addition constructed in a different architectural style, a minor addition should continue the architectural style of the part of the building to which it is attached. However, if the proposed construction is a major addition or consists of changes throughout the structure, the mix of styles should be eliminated in favor of a single predominant style.

Where an existing structure has one predominant building style, the new construction should be compatible and consistent with this style. "Compatible and consistent" does not require that the new construction be a precise copy of the predominant style, but neither does it prohibit this.

DESIGN COMMENTS:

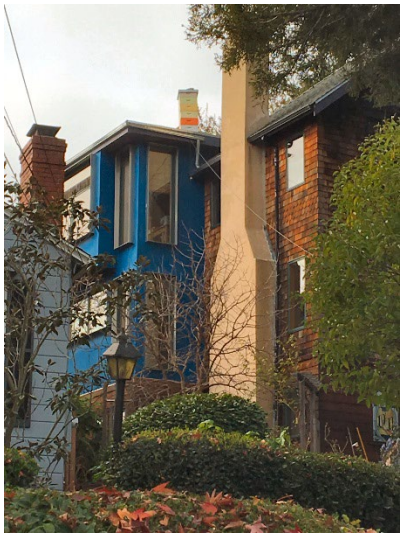
A. Additions may replicate an existing building style to be compatible and consistent with the existing structure. Here is an example of a rear extension where exterior siding, roofing and architectural details replicate those found on the existing building. The windows, while not duplicates, are in keeping with the existing building style.

Yes

B. Additions may use complementary design elements to be compatible and consistent without replicating the existing building style exactly. Here is an example of a rear extension where classical architectural proportions and details reflect the period of the existing building style, without duplicating the existing exterior materials.

Yes

C. An addition that is inconsistent with the predominant building style that appears tacked on is immediately apparent as a different structure and fails to meet the objective of this guideline.



No

DESIGN GUIDELINE: ON-SITE DESIGN COMPATIBILITY (CONT'D)

3. For major modifications or additions to an existing structure where no one building style is predominant, the new construction provides an opportunity to establish a predominant building style. Projects should capitalize on this opportunity by modifying the remainder of the building, as well as any accessory structures, to improve architectural cohesion.

4.01.02 STYLISTIC CHANGES TO EXISTING STRUCTURES

DESIGN GUIDELINE: ON-SITE AESTHETIC DESIGN

1. Where there is a desire to change the existing building style, such changes should be applied to the entire exterior, and to accessory structures, and not only to the area where new construction is proposed.

DESIGN COMMENTS:

Yes

A. In this remodel and front garage addition, new architectural elements and details are employed throughout to unify existing and new construction into a singular building style.

Yes

B. In this remodel, new shingle siding provides a contrast to a top floor stucco band. New windows and trim elements help unify an updated Prairie style.

Yes

No

C. In this remodel, elements of a mid-20th Century building were unified with new exterior materials, windows and details, creating new shadow lines and establishing a unified contemporary building style.

D. This residence, with a horizontal addition, is perceived as two separate buildings. The two contrasting styles compete with each other.

4.01.03 DOCUMENTING COMPATIBILITY WITH BUILDING STYLE

The applicant for the new construction shall be responsible for including graphic materials in his/her submission to the City, documenting compatibility and consistency with a predominant building style.

4.02 BUILDING ELEMENTS

DESIGN OBJECTIVES:

1. Encourage garages, decks and porches to complement the architecture and design of the primary residence.
   Ref: General Plan Design and Preservation Element Policy 28.5
2. Encourage the use of exterior materials that are appropriate to the property.
   Ref: General Plan Design and Preservation Element Policy 28.6
3. Ensure the restoration of original period details of existing homes.
   Ref: General Plan Design and Preservation Element Policy 31.4
4. Allow original materials and methods when practical when alterations are proposed for historic homes.
   Ref: General Plan Housing Element Policy 2.5

The following guidelines apply to discretionary design review permit applications.

4.02.01 ON-SITE AESTHETIC DESIGN CONSISTENCY

Determining consistency within an architectural style requires breaking a building into its individual elements, establishing how those elements contribute to the building's architectural style, and maintaining that relationship as the building is changed. With respect to remodels and additions, key elements of the existing structure should be reflected in the design of the addition or remodel. Consistency in rhythm, texture, color and materials is also critical. When there is a wholesale stylistic change to a structure, the same principles may be used, with all of the building elements designed to be compatible with the new building style. Elements and details which should be matched are described in the design guidelines below.

DESIGN GUIDELINES:

1. **Foundations:** The appearance of the foundation of an addition should match the appearance of the foundation of an existing structure, so that it appears that the two are continuous. This is especially important for those portions of the foundation which will be visible from the street and adjacent parcels.

2. **Porches:** The construction of additional porches or the reconstruction of an existing porch should match any porches which were original to the existing structure. Particular attention should be given to the porch roof, columns, balustrades and railings, which are usually the most visible elements of the porch. New elements should be compatible with the design of the existing elements. For new construction, the building elements of a porch should also be consistent with the overall building style. Elements which are inconsistent with the architectural style of the building should be avoided.

Yes

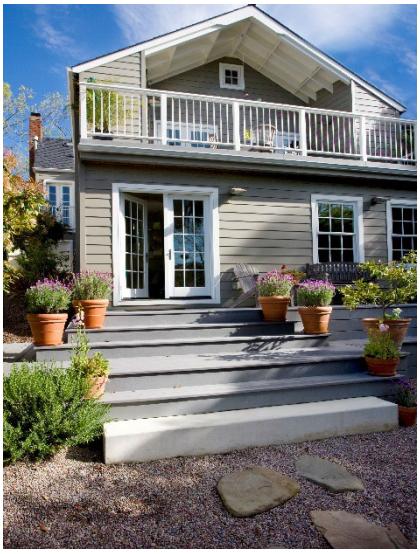
Yes

Yes

3. **Decks and Balconies:** Deck and balcony additions to existing structures, as well as decks and balconies that are part of new structures should be consistent with the architectural style of the building to which they are attached.

DESIGN COMMENT:

Yes



Yes

Yes

Yes

A. This may be achieved by employing compatible details to the structural framing of the deck or balcony, to give it a more finished appearance. Along with porches, attention should be given to columns, beams, balustrades and railings, to ensure design compatibility, as shown in the four examples above.

DESIGN GUIDELINE:

4. **Decks; Steep Sloping Lots:** The design of a deck or porch constructed on the downslope side of a residence should be integrated into the design of the residence and should avoid designs which appear to increase its effective bulk.

DESIGN COMMENTS:

A. Decks and porches on the downslope sides of houses which are supported by the structure of long posts and braces can appear to be massive and overpowering when viewed from below. The support structure itself is often unsightly. The intent is to avoid such designs and to encourage those which reduce the visual impact of such decks and porches. Possible alternatives include dividing a single deck or porch into two or more terraced levels, or using the roofs of lower levels of the residence as the surfaces for a deck or porch serving the upper levels of the residence.

No

Yes

B. When these alternatives are not feasible and the use of an overhanging surface is desirable, the supporting superstructure should be integrated into the overall design of the residence, and the total number of supports and braces should be the minimum required for structural safety. Attention to the finished carpentry and detailing of the deck or porch consistent with that of the existing residence will provide refinement and visual interest. Further, the overall visual impact of the support structure, as well as the overhanging deck or porch structure, should be softened by plantings, and by painting the support structure a color to blend in with the house. In limited cases, and where excessive mass would not result, it may be acceptable to enclose the area under the deck, in order to visually integrate it with the house.

DESIGN GUIDELINES:

5. **Stairs:** Exterior stairs should be consistent with the architectural style of the structure, especially if they will be visible from the street. Consistency also applies to stair railings. If it is cost prohibitive to exactly replicate the original stair railings, the original design should be followed in simplified form.

Yes

Yes

Yes

Yes

Yes

6. Doors: Doors for new structures and additions, as well as new or replacement doors for existing structures, should be consistent with the architectural style of the building, while maintaining its security.

Yes

Yes

7. Exterior Wall Material: The material used on the exterior walls of an addition or remodeled portion of a structure should be consistent with the design integrity of the existing building. This may be achieved using different, yet compatible materials (above left), or by matching the materials of the existing structure (above right).

DESIGN COMMENT:

A. Where the original exterior wall material of a building has been replaced or covered with material that is inconsistent with the original material, the construction of an addition may offer the opportunity to restore the original conditions. Where it is impossible to obtain material which exactly matches the existing conditions, a close substitute should be used.

DESIGN GUIDELINES:

Yes

A third story addition at the top right uses ornamentation and design details found at the existing residence at the top left.

Yes

A two story addition on the right with a new addition over the entry use design details found on the existing portion on the left.

8. **Ornamentation; Remodels/ Additions:** The ornamentation and the design details of the addition should be consistent with those of the existing structure. Conflicting or inappropriate ornamentation should be avoided.

Yes

Yes

9. **Ornamentation; New Construction:** The ornamentation and design details within new construction should be consistent with and help define the architectural style of the building.

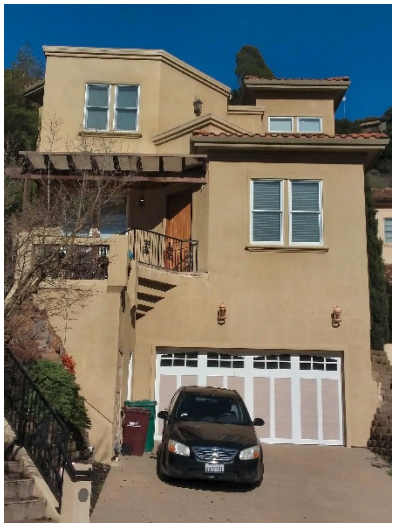
Yes

Yes

10. **Roof: Remodels/ Additions:** When a new roof is part of an addition or remodel, it should be consistent with the design integrity of the existing structure. The geometry of the new roof should relate to that of the existing roof. Individual design elements which need to be addressed include the type and pitch of the roof, cornices, gable-end finish, gutters, roof covering, and trim and molding. For example, an addition to a residence with a gable roof should extend the existing roof or match the pitch of the existing roof.

11. **Roof; New Construction:** When a roof design is established for a new structure, the type, slope and details of the roof should be consistent throughout the building. This does not mean that all roof slopes have to be identical, however the composition of the roof forms should be consistent with the style of the building.

Yes



No

Yes

4.03 WINDOW REPLACEMENT AND NEW WINDOWS

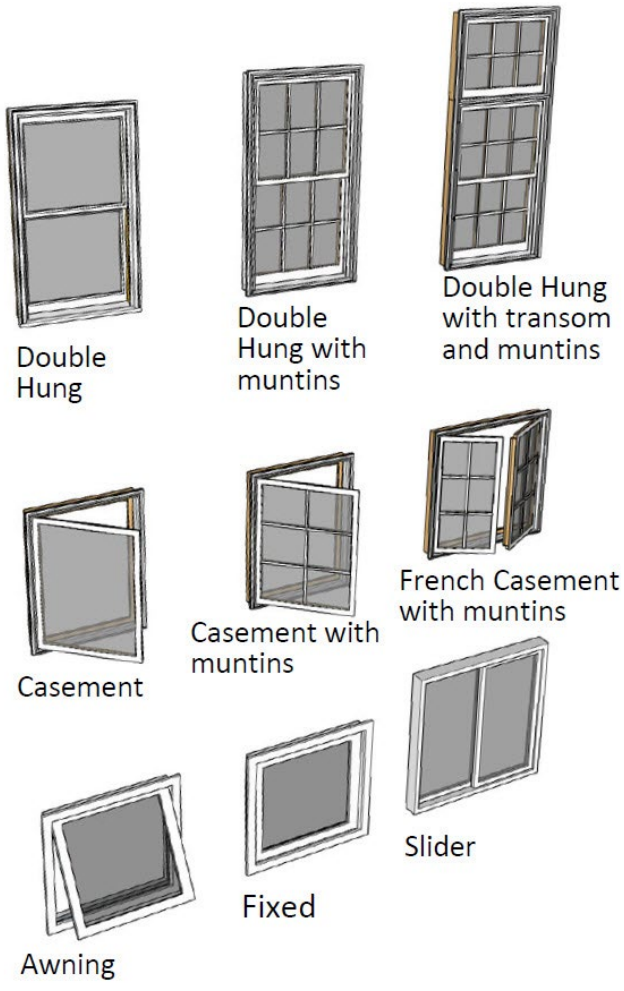
The following guidelines apply to discretionary design review permit applications.

4.03.01 SUBMITTAL REQUIREMENTS: WINDOW REPLACEMENT

Design review applications where the scope of work is *only* for modifying or replacing existing windows and/ or the installation of new windows in an existing wall may use the Expedited Design Review Permit Application process, as described in Chapter 2, Sec. 2.01.01 and Sec. 2.02 of these guidelines. Information regarding the drawings required to accompany the Expedited Design Review Permit Application may be found in Chapter 2, Sec. 2.06 of these guidelines.

4.03.02 TYPES OF WINDOW OPERATION

The drawings at right show standard types of window operation. The actual size, design and placement of these window types will vary, depending upon the style of the building to which they will be applied.



4.03.03 ON-SITE AESTHETIC DESIGN COMPATIBILITY; REPLACEMENT WINDOWS AND NEW WINDOWS ON EXISTING STRUCTURES:

DESIGN GUIDELINES:

Yes

New replacement windows are compatible with the building style.

Yes

New windows are part of the stylistic change to an existing building.

1. When replacing existing windows, installing new windows in an existing wall, or installing new windows in an addition, the type, proportion, placement, details and materials of new windows should be compatible with the existing windows, or with the original windows on the building should the existing windows be architecturally-inconsistent replacements. Window elements that should be addressed include the frame, pattern of the lites defined by the muntins, the trim used to surround the frame, and the degree to which the existing windows are recessed from the face of the wall. While it is not necessary to exactly replicate the existing pattern of muntins and lites, it should be as close as possible to reflect the original design in the new windows.

2. The primary focus in determining window compatibility is design and long-term quality and durability rather than actual material composition. Nevertheless, the use of vinyl framed windows is prohibited, unless they are paintable.

3. Window hierarchy shall be considered during the review of the permit application, including differences between primary windows that may have a greater level of detail (divided lites, increased size, and special treatments such as arches) and secondary windows. In all cases, there should be consistency in window proportions, operation, trim, and appearance.

Yes

Windows at the addition to the left are consistent with the existing windows to the right.

4. Where there is a mix of existing window styles, replacement window materials and designs should be consistent on any elevation that is visible from a private or public street. Regardless of their location, all of the window frames and trim for the building should be the same color. While there may be some difference in window styles where new and existing windows occur, the overall appearance of windows should be consistent.

Yes

The new second floor addition uses the mix of window styles found at the existing first floor.

5. Where non-original windows are replaced on a building with a mix of existing window styles, the replacement window should more closely replicate or simulate the original windows.

DESIGN COMMENTS:

Yes

No

A. Windows at the second floor are consistent with the original windows at the first floor.

B. Windows at the second floor are incorrectly proportioned, have a different style and do not remotely resemble the original windows at the first floor.

DESIGN GUIDELINES:

6. The use of simulated divided-lite grilles on new windows is acceptable if they are located on both the outside and inside faces of the window, have spacer bars between the double panes of glass and are three dimensional, with profiles that are similar to the design of the original windows.

4.03.04 ON-SITE AESTHETIC DESIGN COMPATIBILITY; WINDOWS IN NEW CONSTRUCTION

The following guidelines apply to new construction and discretionary design review permit applications:

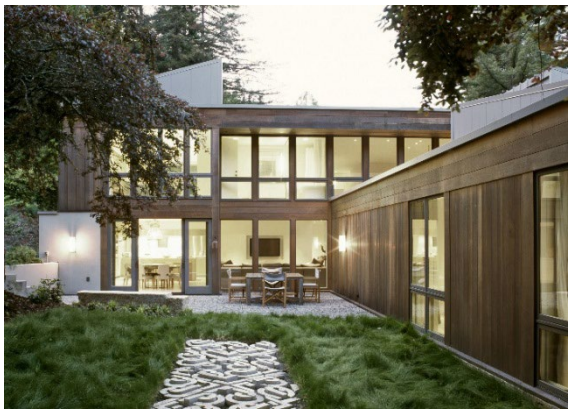
DESIGN GUIDELINES:

1. The size, type, proportion, placement, details and materials of windows should be compatible with the overall building style. Window elements that should be addressed include the frame, the pattern of the lites defined by the muntins, and the trim used to surround the frame.

2. Windows should be used to modulate the building facade, to help diminish its mass and scale.

3. Windows should be recessed from the face of the building wall to create a distinct shadow line.

Yes



Yes

4. Creating a hierarchy of primary and secondary window sizes and types helps organize the character of the window design. By limiting the number of different window sizes and types, the overall rhythm of the building design is maintained, preventing the placement of windows from appearing arbitrary.

DESIGN COMMENTS:

Yes

A. The sizes and types of the recessed windows respond to their locations, be they located in a bay window, roof dormer or tower.

No

B. Windows are not adequately recessed, eliminating shadow lines. Too many different incorrectly scaled window types are on the same wall plane. The window trim is inappropriate for the style and size of the windows.

DESIGN GUIDELINES:

5. Reflective or opaque tinting of glazing is prohibited.

6. The provisions outlined in Piedmont Design Guidelines Sec. 4.03.03.6 for simulated divided-lite grilles also apply for new construction.

7. The use of non-traditional window materials and details that are incompatible with a building style, such as foam-based stucco trim on stucco walls, is prohibited.

4.04 MECHANICAL EQUIPMENT

The following guidelines apply to discretionary design review permit applications.

4.04.01 NEIGHBORHOOD AND CONTIGUOUS PARCEL COMPATIBILITY

DESIGN GUIDELINES:

1. Noise and odor generating equipment, such as water pumps, heat pumps, air conditioning condensers, kitchen hood exhaust fans, and pool equipment, should be located so that noise generation is within the maximum decibel limit regulated by the Piedmont Building Code.

2. To ensure neighborhood compatibility, mechanical equipment is prohibited within the setback area unless it is enclosed within an allowable site feature.

4.04.02 ON-SITE AESTHETIC DESIGN COMPATIBILITY

DESIGN GUIDELINES:

1. Site-and ground-mounted mechanical or electrical equipment should be screened using plant materials, fencing, walls, or other approved means to shield the equipment from view.

2. Roof mounted equipment greater than 12 inches above the roof line, except for roof exhaust vents, plumbing vents, and solar panels, should be screened from being viewed from the public right-of-way.

3. Utility connections should be located in a way that does not interfere with the design character of the buildings they serve. They should not be located in a street-facing manner.

4. Runs of all supply, exhaust and venting plumbing, conduits, and flues should be concealed within the walls of a building. If concealment is infeasible, the run should be minimized, discretely placed, and painted to match the adjacent wall.

5. Utility connections should be screened or painted to blend in with the exterior materials to which they are mounted.

DESIGN COMMENTS:

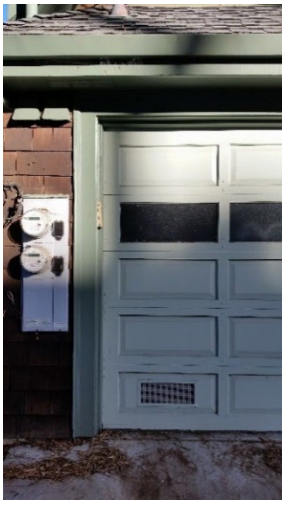
Yes

A. Utility connections are best hidden in a cabinet with a blind door that matches the exterior wall material. In the example above, the door is flush with the exterior wall, just below and to the right of the light fixture.

Yes

B. Utility connections and mechanical vents may be painted to match the color of the adjacent wall surfaces.

C. A utility connection that is surface mounted and contrasts with the surrounding wall surfaces is strongly discouraged.



No

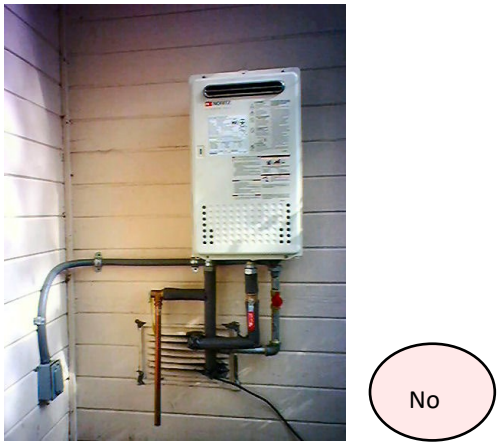
DESIGN GUIDELINES:

6. **Tankless Water Heaters: Preferred Permitted Locations:** The City of Piedmont strongly encourages tankless water heaters to be installed in the interior of a building with an external flue. Typical locations may include, but are not limited to, basements, crawl spaces, garages, laundry rooms, furnace rooms, and closets, subject to the manufacturers' requirements for ventilation and clearance. If the exterior flue does not project more than 12 inches from the wall and is painted to match the wall color, it does not require a design review permit.

7. **Tankless Water Heaters: Alternate Locations:** Only in unusual circumstances when it is physically not possible to install the tankless water heater inside a building, they may be installed on an exterior wall, providing all electrical and plumbing supply lines are hidden. They may also be installed in an exterior wall cavity. Clearances and ventilation requirements by the manufacturer must be met, and the device must be concealed with a panel or door that is flush with the exterior wall. Any surface mounted device, cavity door or flue must be painted to match the adjacent wall color.

DESIGN COMMENTS:

A. An exterior wall mounted tankless water heater, painted to match the adjacent wall color, with plumbing and electrical lines hidden.



B. An exterior wall mounted tankless water heater with plumbing and electrical lines exposed.

4.05 GREEN BUILDING MEASURES AND RENEWABLE ENERGY FEATURES

DESIGN OBJECTIVES:

1. Support green building methods.
   Ref: General Plan Natural Resources and Sustainability Element Policy 16.2
2. Encourage greener construction to reduce energy consumption.
   Ref: General Plan Housing Element Goal 6
3. Encourage the use of energy efficient materials in major additions and remodels.
   Ref: General Plan Housing Element Policy 6.2
4. Encourage drought tolerant landscaping and water conservation.
   Ref: General Plan Housing Element Policy 6.7
5. Reduce residential building energy use.
   Ref Climate Action Plan 2.0 Objective BE-1
6. Increase renewable energy to 100% by 2030
   Ref Climate Action Plan 2.0 Objective BE-3

The following guidelines apply to discretionary design review permit applications.

4.05.01 INTRODUCTION

According to the U.S. Green Building Council, as of 2016, 39% of carbon emissions were due to residential and commercial building construction in the United States. This amount was greater than the percentage of carbon emissions produced by either industry or transportation. Additionally, buildings consume 70 percent of the electricity load in the United States. In 2017 52.2% of Piedmont's total greenhouse gas emissions resulted from the use of buildings. In light of these statistics, green building measures and renewable energy features are critical tools to reduce greenhouse gas emissions. These measures preserve natural resources, increase energy efficiency and promote long term sustainability.

While the State of California Building Standards Commission's Green Building Standards form a baseline for energy and green building compliance, exceeding these standards can help achieve local climate action goals. Certified rating systems, such as Build it Green, Leadership in Energy and Environmental Design (LEED), The Living Building Challenge, The Passive House Institute, or The Sustainable SITES initiative for landscape design, are encouraged.

Green building measures should be part of the initial design strategy. This includes assessing existing site and building conditions to maximize energy efficiency, and avoiding the use of high carbon emission products. It also includes landscape design that minimizes water consumption, responds to heating and cooling needs, and absorbs stormwater runoff. Sustainable landscape and building guidelines are presented below.

4.05.02 ON-SITE LANDSCAPE DESIGN PRINCIPLES DESIGN GUIDELINES:

1. Protect existing soil conditions and mature planting.

2. Encourage the selection of drought tolerant plant materials that are compatible with local climate and topography and that require little or no irrigation during the dry season.

3. Encourage the employment of Bay-Friendly Landscaping principles in landscape design and maintenance.

4. Strategically place shade trees to reduce building energy consumption.

5. Develop efficient irrigation systems that use plant-specific or pop-up irrigation emitters to eliminate excessive water use.

6. Consider treating storm water on-site as much as possible, using devices such as bioretention planter boxes, cisterns, bioswales, vegetated swales and rain gardens to prevent excessive water runoff.

7. For paved areas, consider using permeable paving, as recommended in Chapter 3, Section 3.11 of the Guidelines, to reduce water runoff.

4.05.03 ON-SITE BUILDING DESIGN PRINCIPLES DESIGN GUIDELINES:

1. Consider using recycled materials or framing and finish materials with a high recycled content, when practical. This includes the use of concrete that incorporates recycled fly ash or slag instead of Portland cement.

2. Use sustainably harvested materials or rapidly renewable materials, such as those certified by the Forest Stewardship Council.

3. Consider using locally sourced materials when practical.

4. Encourage the use of passive solar principles, including the appropriate placement of windows along a building's southern exposure and daylit interiors as much as possible.

Additional information on making a building more energy efficient may be found in recommendations from the U.S. Green Building Council at USGBC.org and Build It Green at builditgreen.org.