



## RECOMMENDATION RESOLUTION

### Historic Preservation Commission

**Recommendation Number: (2019-03RR):** Recommending that a sustainability purpose section be added to Article 5, Standard Guidelines for Sustainability, of the Historic Design Guidelines.

WHEREAS, the City's Comprehensive Plan, "Vision San Marcos: A River Runs Through Us," recognizes that the citizens of San Marcos "are conscious of preserving our rich historical past and will pursue future cultural enrichment"; and

WHEREAS, toward that end, the City boasts seven locally designated historic districts and eight locally designated landmarks while other structures and sites have been recognized at the national and state levels for their historical or cultural significance;

WHEREAS, the City Council has created a Sustainability Committee to provide focus for the City on implementing more sustainable practices;

WHEREAS, the Historic Preservation Commission established sustainability guidelines within the Historic Design Guidelines in 2014 (Resolution 2014-92R) to assist property owners in more sustainable practices in maintaining historic properties; and

WHEREAS, to uphold the goals of the Comprehensive Plan, the goals of the City Council's Sustainability Committee, and to preserve the City's historical and cultural resources for future generations, the Historic Preservation Commission has explored including a purpose statement within Article 5 of the Historic Design Guidelines.

NOW, THEREFORE, BE IT RESOLVED that the Historic Preservation Commission recommends that the San Marcos City Council consider the initial authorization of a text amendment, per Section 2.4.1.2 of the San Marcos Development Code, to Article 5 of the Historic Design Guidelines to include a purpose statement regarding sustainability substantially in the form attached.

Date of Approval: December 5, 2019

Record of the vote:

Attest:   
\_\_\_\_\_  
Griffin Spell, Chair, Historic Preservation Commission



## Proposed Amendment

### Article 5: standards for guidelines for sustainability

#### **Section C.5.1.1 Purpose**

**A. Before implementing any energy conservation measures to enhance the sustainability of a historic building, the existing energy-efficient characteristics of the building should be assessed. The key to a successful rehabilitation project is to identify and understand any lost original and existing energy-efficient aspects of the historic building, as well as to identify and understand its character-defining features to ensure they are preserved. The most sustainable building may be one that already exists. Thus, good preservation practice is often synonymous with sustainability. There are numerous treatments—traditional as well as new technological innovations—that may be used to upgrade a historic building to help it operate even more efficiently. Whether a historic building is rehabilitated for a new or a continuing use, it is important to utilize the building’s inherently-sustainable qualities as they were intended. It is equally important that they function effectively together with any new measures undertaken to further improve energy efficiency. The following guidelines offer specific guidance on how to make historic buildings more sustainable in a manner that will preserve their historic character.**

## ARTICLE 5: STANDARDS FOR GUIDELINES FOR SUSTAINABILITY

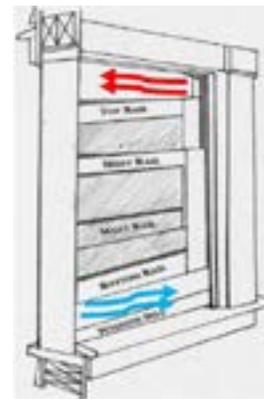
### Section C.5.1.1 Introduction

- A. Design and construction of historic structures maximized the use of natural resources such as light and ventilation. This Division will explore old and new techniques to assist you in maintaining your home and provide additional energy efficient options. These techniques and options will allow your home to operate efficiently while maintaining its character defining features. Proof of an Energy Audit from the City of San Marcos' Conservation Coordinator is recommended prior to undertaking the following techniques. The least visible improvements shall be undertaken first. The more visible improvements should only be considered once the least visible improvements have been completed.
- B. All exterior work visible from the right-of-way requiring a building permit requires a Certificate of Appropriateness and must conform with all of City of San Marcos ordinances. It is helpful when using these guidelines to be familiar with your architectural style.

### Section C.5.1.2 Wood Windows - Maintenance and Efficiency



- A. **General.** The US Department Of Energy estimates that windows account for roughly 10% of a structure's air loss. Three basic steps can be taken to reduce the amount of air loss through the window unit; maintenance and the installation of Low-E film and storm windows.



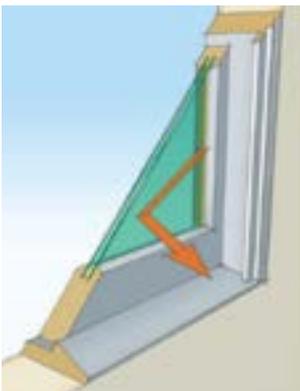
- B. **Maintenance, Weather Stripping and Caulking.** Maintaining windows on a regular basis to ensure that they operate properly will significantly reduce the amount of air loss. This includes replacing rotten wood, painting, and adding weather stripping and caulk. Weather stripping should be used between the movable parts of a window. It can easily become ripped, torn, loose, bent or otherwise damaged so follow the manufacturers instructions for installation and routinely inspect and replace if needed. Caulk and other sealants can be used on the exterior

of your building where different materials meet or where expansion and constriction occur.

- C. Low-E Film.** A quick and inexpensive fix is to apply Low-emissivity film (Low-E). This can reduce your window energy loss by 30% to 50%. In warmer climates the film should be applied to the exterior of the window pane to reflect solar radiation out. In cooler climates the film should be placed on the interior of the window pane. So heat is reflected back into the house. The film can be purchased at your local hardware store and has a lifespan of approximately 10-15 years.



Windows with Low-E coating reflect back part of the summer sun. IMAGE SOURCE: Energy Savers, U.S. Department of Energy.



Windows with Low-E coating reflect back part of room's heat. IMAGE SOURCE: Energy Savers, U.S. Department of Energy.

- D. Storm Windows and Doors.** Storm windows can be installed either on the interior or exterior of the structure to increase the thermal performance of your window. The addition of a storm window to a single pane window will have an energy rating close to that of a double pane replacement unit. Storm windows avoid the irreplaceable seal failure on insulated glass units (IGUs). The typical life span of an IGU is approximately

25 years. Storm windows can also be purchased with a Low-E coating. Storm windows and doors should not be installed in locations where they damage or conceal significant features and should fit the opening.



### Section C.5.1.3 Shutters

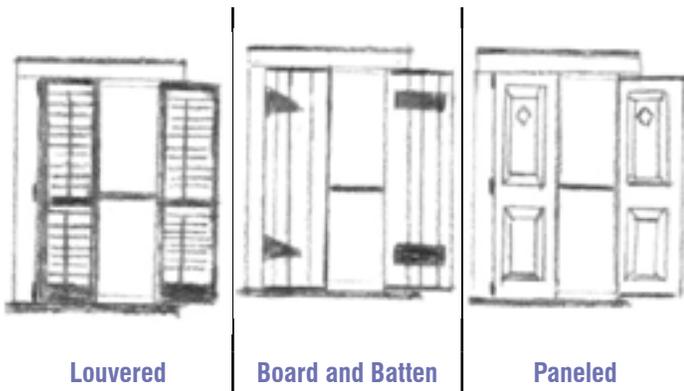
- A. General.** Historic windows are recessed within the wall of the structure. This allows for either a shutter or a screen to sit within the frame of the window unit. When the shutter is closed it creates a flush condition that provides protection from storms and intruders. Exterior shutters, historically have been used to provide privacy and security while controlling light and air circulation. For this reason, all shutters shall be operational (hinged). The style of shutter is dependent upon the architectural style and not all styles can accommodate shutters. Styles that cannot accommodate shutters can accommodate wood screens and awnings on the exterior and blinds on the interior.

#### B. Shutter Types

- 1. Louvered.** Provide the most control for light and air circulation. They can be closed and locked, with the louvers open. This provides protection from rain and security while allowing light and air in. Louvered shutters are appropriate for all style of homes.
- 2. Board and Batten.** Are vertical boards, usually beaded tongue and groove, fastened by horizontal battens. They

provide security but do not allow for the control of air circulation and light. They are appropriate for Arts and Crafts style structures, with or without a decorative cutout and Tudor style structures. They are NOT appropriate for Victorian style structure.

- 3. **Paneled.** These shutters have panels and don't afford much control of air circulation or light infiltration. They are appropriate for Arts and Craft style structures, with a decorative cutout, and for ground floor commercial Victorian style structures, without a decorative cutout.



help to trap heat in the winter months. The reflection of the sun ray's will also extend the life of your window unit.



**Section C.5.1.5 Cool Roofs**

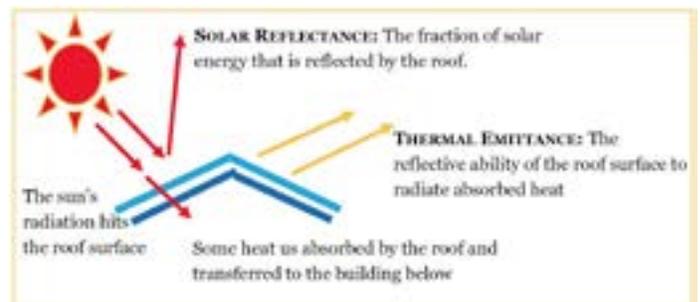
- A. **General.** Cool roofs reflect and emits the sun's heat back into the sky instead of transferring it to the structure. Their average energy saving range from 7-10%. There are several different types of cool roofs. They range from coatings for metal roofs and flat roofs to reflective granules on asphalt and other synthetic shingles.



Cool Roofs come in three colors in asphalt/ fiberglass shingles. They are typically lighter and more reflective than traditional roof shingles.

**Section C.5.1.4 Screens for Doors and Windows**

- A. **General.** Screening became popular in the 1880s and remained popular throughout the United States. It fell out of favor as air conditioning became affordable. During the beginning of the 20th century it was so popular that a 1930 survey from The Journal of Home Economics ranked window screening as the third most important "household appliance" behind running water and sewage disposal. Screen doors can be simple in design or can match the style of the main structure. Paired and ribbon windows will not accommodate shutters; however, wood screens can be installed to help control light and air circulation. Screens also provide some protection from rain and sun. Screens can be combined with shutters. Structures that have shutters located on the exterior will have screens located on the interior; while, windows that can not accommodate shutters will often have screens on the exterior with blinds on the interior.
- B. **Solar Screen.** Solar screening is more opaque than traditional screening. This allows for more privacy while still allowing for air circulation. It will reduce the amount of light infiltration, by reflecting the sun's rays and because of its thickness it will

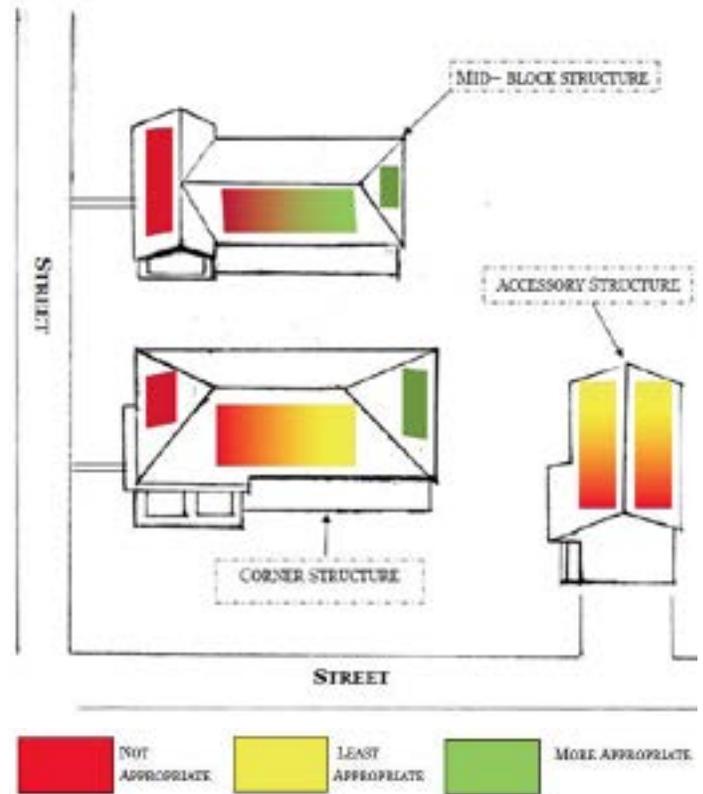


**Section C.5.1.6 Solar Panels**

**A. General.** Prior to installing solar technology on-site, try improving the energy efficiency of the structure through other passive methods such as awnings, and screens. When placing solar panels on-site, consider the impact that the technology will have on the historic character and fabric of the site. Consider the following locations prior to requesting the installation of solar technology on historic structures:

1. Pole mounted below the fence line
  2. Non-historic structure on the site
- B.** If the desired energy efficiency cannot be achieved in the above locations then consider the following location:
1. Historic Accessory Structures
- C.** If the desired energy efficiency cannot be achieved by placing solar technology in the above three areas, and the technology must be place on the historic structure, then the following locations should be considered in the order listed below.
1. Non-visible roof slope
  2. Rear roof slope
  3. Rear portion of side or secondary roof slope
  4. Side or secondary roof slopes
  5. Front or primary roof slope
- D.** In addition, solar panels installed on the main structure should conform to the slope of the roof and not extend past the ridge line or eave line of the roof. Note, that solar panels may be permissible if visible only along an alley.

**Most and Least Appropriate Locations for Solar Panels**



**Section C.5.1.7 Additional Resources**

- A.** NPS Preservation Brief #3 Improving Energy Efficiency in Historic Buildings
- B.** NPS Preservation Brief #9: The Repair of Historic Wooden Windows
- C.** NPS Preservation Brief #44: The Use of Awnings on Historic Buildings: Repair, Replacement and New Design
- D.** The Secretary of the Interior’s Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings
- E.** The Secretary of the Interior’s Standards for Rehabilitation and Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings
- F.** Energy Savers, US Department of Energy
- G.** National Trust for Historic Preservation’s Preservation Green Lab

- H. National Trust for Historic Preservation’s “Repair or Replace Old Windows: A Visual Look at the Impacts”
- I. National Trust for Historic Preservation’s “Energy Advice for Owners Historic and Older Homes”

**Section C.5.1.8 Sustainability Standards**

- A. Proof of an Energy Audit from the City of San Marcos’ Conservation Coordinator is recommended prior to undertaking the following techniques. The least visible improvements shall be undertaken first. The more visible improvements should only be considered once the least visible improvements have been completed.
- B. Desired locations of solar panels shall be: pole mounted (not visible above fence line), rear roof slopes and rear portion of side (secondary) roof slopes, alleyways, and the least visible portion of non-historic accessory structures.
- C. Solar panels located on front roof slopes or primary roof slopes shall only be permitted provided that they increase energy production by more than 10%.
- D. Solar panels shall conform to the slope of the roof.
- E. Solar panels shall not extend above the ridge line of the roof.
- F. Shutters shall be operational (hinged) and fit the opening.
- G. Shutters on paired or ribbon windows are prohibited.
- H. Vinyl and metal shutters are prohibited.
- I. Storm doors and windows shall not damage or conceal significant features and shall fit the opening.
- J. Screen doors and widows should be made of wood and shall not damage or conceal significant features and shall fit the opening.
- K. Metal screens or storm doors and windows shall have a factory painted finish or shall be painted to match the window frame or sash.