

SOLAR INSTALLATIONS OVERVIEW

South of the Green Historic District #2, Milford CT

1. **Intent.** These guidelines aim to assist property owners within the South of the Green Historic District #2 in the City of Milford Connecticut desiring to install solar energy systems on buildings within the District. The City's charge to the South of the Green Historic District #2 Commission is to promote the educational, cultural, economic and general welfare of the City through the preservation and protection of buildings and places of historic interest in the District, while accommodating the State of Connecticut's objective of the utilization of renewable resources.
2. **Applicability.** If the Commission finds that the solar energy installation cannot be installed without substantially impairing the historic character and appearance of the District, then the Commission may deny a Certificate of Appropriateness to the applicant in which event the City's Building Department will deny the applicant a building permit for the installation. In order to issue a COA, the Commission may include stipulations requiring design modifications and limitations on the location of the installations which do not significantly impair its effectiveness.

GENERAL GUIDANCE

1. **Overall Goal.** When a home owner in the District plans the installation of solar panels on their historic property, the overall goal is to reduce the visual impact of the solar panels where visible from a public street and to preserve the existing exterior architectural features of the building with consideration to preserving character-defining features and the historic fabric of the District.
2. **Case-By-Case Basis.** The Commission will consider all solar panel installations on a case-by-case basis, noting the individual characteristics of each property and structure in the District. Solar installations have improved over time and many of the older installations in the District were installed without a COA or without building permits. The Commission may, but is not required to, consider existing installations in the District in determining whether or not to grant a COA.
3. **The Secretary of the Interior Standards.** The Commission may, in its discretion, take guidance from The Secretary of the Interior Standards for Rehabilitation & Illustrated Guidelines on Sustainability section on Solar Technology that is made a part of the Connecticut Statutes and the City of Milford Ordinances as applicable to historic properties, attached, and may request that the applicant's solar panel installations conform to these standards. The Commission recommends that all applicants be familiar with these standards and be prepared to explain any differences between the application and these standards. In particular, all applicants should note the Commission considers the following standards in all COA applications:

1. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
2. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

4. In order to preserve all “existing exterior architectural features” of the structures in the District as well as “character-defining characteristics and historic fabric”, the Commission does not recommend solar installations that require or cause any of the following:

1. Any impact on the visibility of the structure’s front elevation from a public street.
2. Removal of historic roofing materials.
3. Removal or alteration of or to a roof’s configuration – dormers, chimneys, or other existing architectural features of the roof.
4. Use of an installation procedure that might or will cause irreversible changes to existing historic features or materials.
5. Location solar panels on a street-facing roof plane.
6. Location of any solar systems in windows, or on walls, siding and shutters, visible from any public street.
7. Placement or design of solar panels that detract from the historic character of structures on the property and that are visible from any public street.

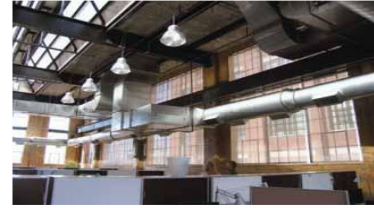
5. The Commission Suggests The Following As To All Solar Systems:

1. Place the system on a roof face, such as the rear roof, which cannot be seen from the public street.
2. Position the system or shingles behind existing architectural features - such as parapets, dormers, or chimneys - and set them back from the roof edge to limit visibility from the public street.
3. Adjust pitch and elevation to reduce visibility from the public street:
4. Use equipment that is compatible in color to established roof materials so as to be as unobtrusive as possible.
5. Mount panels flush to the roof face.
6. All electrical equipment and pipe conduits, including all existing equipment and conduits, visible from a public street should also be painted or screened from view.

The Secretary of the Interior's Standards for Rehabilitation

The Standards (Department of the Interior regulations 36 CFR 67) pertain to all historic properties listed in or eligible for listing in the National Register of Historic Places.

- 1) A property shall be used for its intended historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- 2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- 3) Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- 4) Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
- 5) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
- 6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.



[5-6] Large windows and a roof monitor provide natural illumination in a historic industrial building.



[7-9] Porches and canvas awnings provide shade and keep interiors cool in historic residential and commercial buildings.



- 7) Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- 8) Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
- 9) New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- 10) New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

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Recommended: [72-73] Solar panels were installed appropriately on the rear portion of the roof on this historic row house that are not visible from the primary elevation.



Recommended: [74] Free-standing solar panels have been installed here that are visible but appropriately located at the rear of the property and compatible with the character of this industrial site.

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Not Recommended: [75] Solar roof panels have been installed at the rear, but because the house is situated on a corner, they are highly visible and negatively impact the character of the historic property.

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RECOMMENDED

NOT RECOMMENDED

Considering on-site, solar technology only after implementing all appropriate treatments to improve energy efficiency of the building, which often have greater life-cycle cost benefit than on-site renewable energy.	Installing on-site, solar technology without first implementing all appropriate treatments to the building to improve its energy efficiency.
Analyzing whether solar technology can be used successfully and will benefit a historic building without compromising its character or the character of the site or the surrounding historic district.	Installing a solar device without first analyzing its potential benefit or whether it will negatively impact the character of the historic building or site or the surrounding historic district.
Installing a solar device in a compatible location on the site or on a non-historic building or addition where it will have minimal impact on the historic building and its site.	Placing a solar device in a highly-visible location where it will negatively impact the historic building and its site.
Installing a solar device on the historic building only after other locations have been investigated and determined infeasible.	Installing a solar device on the historic building without first considering other locations.

SOLAR TECHNOLOGY

RECOMMENDED

NOT RECOMMENDED

Installing a low-profile solar device on the historic building so that it is not visible or only minimally visible from the public right of way: for example, on a flat roof and set back to take advantage of a parapet or other roof feature to screen solar panels from view; or on a secondary slope of a roof, out of view from the public right of way.	Installing a solar device in a prominent location on the building where it will negatively impact its historic character.
Installing a solar device on the historic building in a manner that does not damage historic roofing material or negatively impact the building's historic character and is reversible.	Installing a solar device on the historic building in a manner that damages historic roofing material or replaces it with an incompatible material and is not reversible.
	Removing historic roof features to install solar panels.
	Altering a historic, character-defining roof slope to install solar panels.
	Installing solar devices that are not reversible.
Installing solar roof panels horizontally – flat or parallel to the roof—to reduce visibility.	Placing solar roof panels vertically where they are highly visible and will negatively impact the historic character of the building.



Not Recommended: [79] Although installing solar panels behind a rear parking lot might be a suitable location in many cases, here the panels negatively impact the historic property on which they are located.

Recommended: [76-77] Solar panels, which also serve as awnings, were installed in secondary locations on the side and rear of this historic post office and cannot be seen from the front of the building. [78] Solar panels placed horizontally on the roof of this historic building are not visible from below.



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