Mitchell J. Landrieu
MAYOR

CITY OF NEW ORLEANS

C. Elliott Perkins
EXECUTIVE DIRECTOR

THE NEW ORLEANS HISTORIC DISTRICT LANDMARKS COMMISSION WILL HOLD A SPECIAL MEETING ON WEDNESDAY, AUGUST 21, 2013, AT 1:00 P.M., 1300 PERDIDO STREET, 7TH FLOOR, CONFERENCE ROOM A. THE PUBLIC IS WELCOME.

The order in which the applications will be heard is subject to change without notice.

AGENDA

I. **Review of existing solar panel guidelines**

II. **Commission and Staff Approvals of Solar Panels**
   A. 2012
   B. 2013, January - August

III. **National Alliance of Preservation Commission Recommendations**

   A. Sample Guidelines for Solar Panels in Historic Districts

IV. **Review of other Commission Solar Panel Policies**

   A. Only allow solar panels when they are not visible from the public right-of-way
      1. Charleston, SC
      2. Providence, RI
      3. New York, NY
      4. Washington, D.C.
      5. Boston, MA

   B. Allow solar panels in minimally or "not easily viewed" locations
      1. Pittsburgh, PA
      2. Baltimore, MD
      3. San Antonio, TX

   C. Unclear what is allowed
      1. Denver, CO
      2. Alexandria, VA

New Orleans Historic District Landmarks Commission
2013 Solar Panel Applications

80 Total Applications
75% of total applications (60) approved at the staff level

4 Approved by Commission
4 Denied by Commission
2 of the 4 Denied by Commission overturned by City Council
1 Retention approved by the Commission
5 Highly visible applications withdrawn
6 Awaiting Commission hearing

Address	Description	Current Status	Historic District
608 Elmira Ave	Install solar panels.	Permit Issued	Algiers Point
400 Elmira Ave	Install solar panels.	Permit Issued	Algiers Point
516 Pelican Ave	Install solar panels.	Permit Issued	Algiers Point
421 Pelican Ave	Install solar panels.	Permit Issued	Algiers Point
423 Pelican Ave	Install solar panels.	Permit Issued	Algiers Point
427-429 Pelican Ave	Install solar panels.	Permit Finaled	Algiers Point
318-320 Bermuda St	install solar panels	Permit Finaled	Algiers Point
421-423 Eliza St	install solar panels	Permit Finaled	Algiers Point
516-518 Belleville St	install solar panels	Permit Issued	Algiers Point
631 Patterson St	Install solar panels on a highly visible	Permit Denied	Algiers Point
3214 Marais St	Install solar panels.	Permit Issued	Bywater
920 Louisa Street	Install Solar Panels	Permit Issued	Bywater
3701 St Claude Ave	Install solar panels	Permit Issued	Bywater
805 France St	Install solar panels	Permit Issued	Bywater
1131 Alvar St	install solar panels	Permit Issued	Bywater
4516 St Claude Ave	Install solar panels	Permit Issued	Bywater
1118 Pauline St	install solar panels	Permit Issued	Bywater
1120 Pauline St	install solar panels	Permit Issued	Bywater
3037 N Rampart St	Construction of detached solar panel	Permit Issued	Bywater
1304 Congress St	install solar collectors	Permit Issued	Bywater
3150 N Rampart St	Install solar panels	Permit Issued	Bywater
1212 Alvar Street	install solar panels	Permit Issued	Bywater
900 Louisa St, 902 Louisa St	Install solar panels on highly visible r	Awaiting HDLC NO Hearing	Bywater

1418 Louisa St	Install solar panels	Awaiting HDLC NO Hearing	Bywater
3816 Urquhart St	Install solar panels	Retention approved by Comm	Bywater
732 Mazant St	Install solar panels.	Awaiting HDLC NO Hearing	Bywater
1909 N. Rampart Street	Install solar panels	Permit Issued	Faubourg Marigny
1911 N Rampart Street	Install solar panels	Permit Issued	Faubourg Marigny
830 St Roch Ave	Install Solar panels	Permit Issued	Faubourg Marigny
2020 St Claude Ave	install solar panels	Permit Issued	Faubourg Marigny
1717-1719 Pauger St	Install solar panels	Permit Issued	Faubourg Marigny
2535 N Rampart St	Install solar panels on a highly visible	VOIDED - Applicant Withdrew	Faubourg Marigny
2537 N Rampart St	Install solar panels on a highly visible	VOIDED - Applicant Withdrew	Faubourg Marigny
1035 Marigny St	Install solar panels less than 10'-0" fr	Permit Issued	Faubourg Marigny
627 Caffin Ave	install solar panels	Permit Issued	Holy Cross
519 Flood Street	Install Solar Panels	Permit Issued	Holy Cross
5528 Dauphine St	Install solar panels	Permit Issued	Holy Cross
5025 Royal St	Install solar panels	Permit Issued	Holy Cross
923 Reynes St	Install solar panels	Permit Issued	Holy Cross
5214 Dauphine St	Install solar panels	Permit Issued	Holy Cross
434 St Maurice Ave	Install solar panels	Permit Issued	Holy Cross
704 Caffin Ave	install solar panels	Permit Issued	Holy Cross
713 Gordon St	Install solar panels	Permit Issued	Holy Cross
908 Lizardi St	Install solar panels	Permit Issued	Holy Cross
714 St Maurice Ave	Install solar panels	Permit Issued	Holy Cross
813 St Maurice Ave	Install solar panels	Permit Issued	Holy Cross
5023 Royal St	Install solar panels	Permit Issued	Holy Cross
5424 Chartres Street	Install solar panels	Permit Denied	Holy Cross
720 Egania Street	Install solar panels	Permit Denied	Holy Cross
5700 Burgundy St	Install solar panels	Permit Issued	Holy Cross
6100 Dauphine St	Installation of solar panels.	Permit Denied	Holy Cross
710 Lizardi St	Install solar panels	Awaiting HDLC NO Hearing	Holy Cross
418 Tricou St	Install solar panels	Awaiting HDLC NO Hearing	Holy Cross
2922 Laurel St	Install solar panels.	Permit Issued	Irish Channel
820 7Th St	Install solar panels.	Permit Issued	Irish Channel
2423-25 Annunciation St	Install solar panels.	Permit Issued	Irish Channel
2910 Chippewa St	Install solar panels	Permit Issued	Irish Channel
2515 Laurel St	Install solar panels.	Permit Finaled	Irish Channel
2405 Chippewa St	install solar panels	Permit Issued	Irish Channel

836 3Rd St	installation of solar panels per 13-15	Permit Issued	Irish Channel
724-726 Harmony St	Install solar panels.	Permit Issued	Irish Channel
810 Philip St	Install solar panels.	Permit Issued	Irish Channel
2312-2314 Annunciation St	install solar panels	Permit Issued	Irish Channel
3137 St Thomas St	Install solar panels on a highly visible	VOIDED - Applicant Withdrew	Irish Channel
939 7Th St, 2926 Constance	Install solar panels on a highly visible	VOIDED - Applicant Withdrew	Irish Channel
2723 St Thomas St	Install solar panels on a highly visible	VOIDED - Applicant Withdrew	Irish Channel
1347 Moss St	Install solar panels on a designated la	Permit Issued	Landmark
1472 Camp St	Install solar panels.	Permit Issued	Lower Garden District
1241 Annunciation St	Install solar panels	Permit Issued	Lower Garden District
1229 Annunciation St	Install Solar Panels	Permit Issued	Lower Garden District
1431 Annunciation St	Install solar panels.	Permit Issued	Lower Garden District
836 Josephine St	Install solar panels	Permit Issued	Lower Garden District
1113 St Mary St	install solar panels	Permit Issued	Lower Garden District
1541 Chippewa St	Install solar panels	Permit Finaled	Lower Garden District
1461 Constance St	install solar panels	Permit Finaled	Lower Garden District
2114 Laurel St	Install solar panels	Permit Issued	Lower Garden District
902 Jackson Ave	Installation of solar panels on highly	Awaiting HDLC NO Hearing	Lower Garden District
1455 N Robertson St	Revised solar panel shed and rear wir	Permit Issued	Treme
1372 Laharpe St	Install solar panels.	Permit Issued	Treme
1233 Kerlerec Street	Install solar panels	Permit Issued	Treme

New Orleans Historic District Landmarks Commission
2012 Approved Solar Panel Installations

39 solar installations were approved by the HDLC in 2012
36 of the applications met the existing Solar Panel Guidelines
3 applications that deviated from the guidelines were approved by the Commission

Address	Descr	HistoricDistrict
913 Atlantic Ave	Install solar panels	Algiers Point
326 Alix St	Install solar panels.	Algiers Point
1025 Eliza Street*	Install solar panels in deviation of guidelines	Algiers Point
4420 N Rampart St	installation of solar panels	Bywater
840 Pauline St	installation of solar panels	Bywater
721 Gallier St	install solar panels	Bywater
3911 Dauphine St	Install solar panels	Bywater
819 France St	Install solar panels.	Bywater
1312 Feliciana St	Install solar panels.	Bywater
2104 Dumaine St.	Install solar panels	Esplanade Ridge
2834 Dumaine St	Solar panels	Esplanade Ridge
2903 Orleans Ave	Install solar panels.	Esplanade Ridge
1322 N Lopez St	Install solar panels	Esplanade Ridge
929 N Dupre St	Install solar panels.	Esplanade Ridge
1557 N Tonti St	Install solar panels.	Esplanade Ridge
2940 Bell St	Install solar panels.	Esplanade Ridge
1539 Verna St	Installation of solar panels	Esplanade Ridge
924 N Dupre St	Install solar panels.	Esplanade Ridge
920 Spain St	install solar collectors	Faubourg Marigny
823 Spain St	install solar panels	Faubourg Marigny
2406 Burgundy St	solar panels	Faubourg Marigny
2025 N Rampart St	Install solar panels.	Faubourg Marigny
717 Port St	solar panels	Faubourg Marigny
924 Touro St, 926 Touro St	install solar panels	Faubourg Marigny
5400 Chartres St	install solar panels	Holy Cross
820 Jourdan Ave	Installation of solar panels.	Holy Cross
712 Deslonde St	Install solar panels	Holy Cross
821 Jourdan Ave	Install solar panels	Holy Cross
742 Louisiana Ave*	Installation of solar panels in deviation of the g	Irish Channel
3221 Annunciation St	Install solar panels.	Irish Channel

1004 4Th St*	Installation of PV (solar) panels in deviation fro	Irish Channel
914 7Th St	solar panels	Irish Channel
2401 Annunciation St	Install solar panels.	Irish Channel
3318 Constance St	Install solar panels.	Irish Channel
724 Soraparu St	Install solar panels.	Irish Channel
826 Josephine St	solar panels	Lower Garden District
1219 Coliseum St	Install solar panels	Lower Garden District
2624 Governor Nicholls St	Install solar panels.	Treme
2229 Dumaine St	solar panels	Treme

***= approved by commission.**

National Alliance of Preservation Commissions Sample Guidelines for Solar Panels in Historic Districts

Kimberly Kooles, Program Associate, Center for State and Local Policy, National Trust for Historic Preservation

Introduction

The rapidly growing trend toward retrofitting homes to be more energy efficient has brought an increase in the number of applications for installing solar panels on buildings within locally designated historic districts. This increase in solar panel applications has prompted numerous local preservation commissions to hastily develop guidelines for them with varying degrees of success.

The following *Sample Guidelines for Solar Panels for Locally Designated Historic Properties* were developed by Kimberly Kooles as part of her work directing the National Alliance of Preservation Commissions Sustainable Preservation Initiative in 2007 – 2009. They are intended to serve as a starting point for local preservation commissions developing their own guidelines for solar panels.

Sample Guidelines for Solar Panels for Locally Designated Historic Properties

When planning the installation of solar panels the overall objective is to preserve character-defining features and historic fabric while accommodating the need for solar access to the greatest extent possible. All solar panel installations must be considered on a case by case basis recognizing that the best option will depend on the characteristics of the property under consideration. Some guidelines apply to virtually all installation options and are repeated in each section.

All solar panel installations should conform to the Secretary of the Interior's Standards for Rehabilitation. Applicable Standards are:

Standard Two: 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.

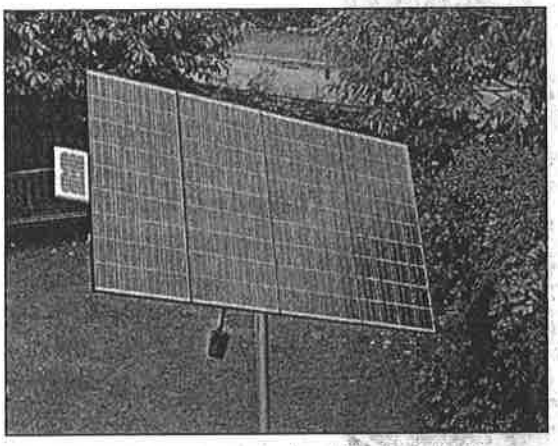
Standard Nine: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

1: Freestanding or Detached On-Site

- Freestanding or detached on-site solar panels should be installed in locations that minimize visibility from the public right of way. These systems should be screened from the public right of way with materials elsewhere in the district such as fencing or vegetation of suitable scale for the district and setting.

- Placement and design should not detract from the historic character of the site or destroy historic landscape materials.

  Consideration to the visibility of solar panels from neighboring properties should be taken, without infringing upon the required solar access.



Freestanding solar panels should be installed in locations that minimize visibility from the public right of way.

2: New Construction On-Site

- Solar panels should be integrated into the initial design of new construction or infill projects, when possible, to assure cohesion of design within a historic context.

- Solar panels should be installed on rear slopes or other locations not highly visible from the public right of way whenever possible. Panels should be installed flat and not alter the slope of the roof.

- Flat roof structures should have solar panels set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from the public right-of-way.

- Use solar panels and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the solar panel system should be treated to be as unobtrusive as possible.

- Use of solar systems in windows or on walls, siding, or shutters should be installed with limited visibility from the public right-of-way.

3: Historic Accessory Structures

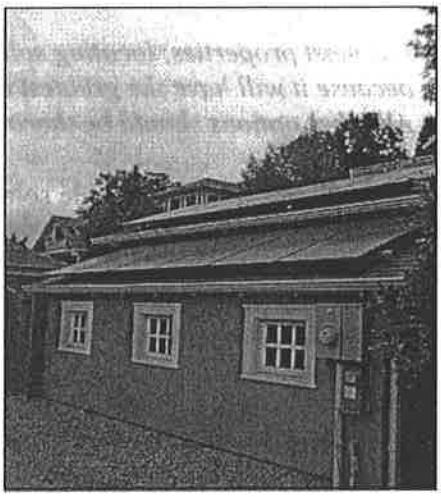
- Solar panels should be installed on rear slopes or other locations not highly visible from the public right-of-way. Panels should be installed flat and not alter the slope of the roof. Installation of panels must be reversible and not damage the historic integrity of the resource and district.

- Flat roof structures should have solar panel installations set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from public right-of-way.

- Solar panel installations should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.

- Use solar panels and mounting systems that are compatible in color to the property's roof materials. Mechanical equipment associated with the photovoltaic system should be as unobtrusive as possible.

- Use of solar systems in non-historic windows or on walls, siding and shutters should be installed as to limit visibility from the public right of way.



Solar panels placed on an accessory structure not visible from the public right of way should still follow the slope of the roof and have a low profile. *Photo courtesy of Dan Corson*

4: Primary Historic Resource (Secondary Elevations)

- Solar panels should be installed on rear slopes or other locations not easily visible from the public right-of-way. Panels should be installed flat and not alter the slope of the roof. Installation of panels must be reversible and not damage the historic integrity of the resource and district.

- Flat roof structures should have solar panels set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from public right-of-way.

- Solar panels should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.

- Use solar panels and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the solar panel system should be painted or treated to be as unobtrusive as possible

- Use of solar systems in non-historic windows or on walls, siding, or shutters should be installed as to limit visibility from the public right of way.

5: Primary Elevation of Primary Resource

For most properties, locating solar panels on the primary facade is the least desirable option because it will have the greatest adverse effect on the property's character defining features. All other options should be thoroughly explored.

- Utilization of low-profile solar panels is recommended. Solar shingles laminates, glazing, or similar materials should not replace original or historic materials. Use of solar systems in windows or on walls, siding, and shutters should be avoided.

- Panels should be installed flat and not alter the slope of the roof. Installation of panels must be reversible and not damage to the historic integrity of the resource and district.

- Solar panels should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.

These solar panels low profile and location make them unobtrusive even though they are visible from the public right of way.
Photo by Paul Trudeau

- Use solar panels and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the photovoltaic system should be treated to be as unobtrusive as possible.

565-0361

Not Recommended for Any Reason

- Removal of historic roofing materials during the installation of solar panels.

- Removing or otherwise altering historic roof configuration – dormers, chimneys, or other features – to add solar panels.

- Any other installation procedure that will cause irreversible changes to historic features or materials.

When considering retrofitting measures, historic building owners should keep in mind that there are no permanent solutions. One can only meet the standards being applied today with today's materials and techniques. In the future, it is likely that the standards and the technologies will change and a whole new retrofitting plan may be necessary. Thus, owners of historic buildings should limit retrofitting measures to those that achieve reasonable energy savings, at reasonable costs, with the least intrusion or impact on the character of the building.

(National Park Service. *Preservation Brief 3: Conserving Energy in Historic Buildings.* Available from http://www.nps.gov/history/hps/TPS/briefs/brief03.htm#Preservation% 20Retrofitting. Accessed on August 10, 2009.)

Charleston, SC

Summary

Charleston does not have a specific policy statement from the Board regarding solar panels. They are reviewed on a case-by-case basis and they generally encourage people to locate them so that they are not visible on historic structures. If they are visible they generally are not approved.

Providence, RI

Summary

Solar collectors should be set back out of view from the public right-of-way.

PROVIDENCE HISTORIC DISTRICT COMMISSION

DESIGN GUIDELINES

for the

JEWELRY HISTORIC DISTRICT

Adopted January 27, 1992. Amended June 25, 1995.

Providence Historic District Commission
444 Westminster Street, Suite 3A
Providence, Rhode Island 02903
TEL: 401.680.8400
FAX: 401.680.8492

the original in texture, dimensions, design and color; natural materials are preferred over synthetics, but substitute materials may be considered. New copper should be allowed to weather naturally. Flashing should be copper or other metal with a dark finish. Rubber roofing is acceptable for flat roof surfaces.

ROOFTOP STRUCTURES AND EQUIPMENT: Historic or original chimneys, towers, turrets, parapets, smokestacks and steeples should be retained and preserved. Roof structures such as decks, elevator and stair headhouses and shafts, skylights, heating and air conditioning equipment, ventilating fans, solar collectors, storage sheds and tanks, communications antennae or masts, and other equipment required to operate a building should be set back out of view from the public way. See Section 412 of the Zoning Ordinance for minimum setback requirements.

ROOFTOP ADDITION: Vertical additions to buildings must not exceed the height limit set forth the Zoning Ordinance. If an addition is feasible, it should be set back from the street, out of view from the public way, so that it will not alter the original scale of the building facade, and so that it will be compatible with surrounding buildings.

WINDOWS

SASH AND FRAMES: Original windows should be retained wherever possible. In most cases it is less expensive to repair the original fabric than to replace all the windows; however, if total replacement of original windows is necessary, similar materials should be used and the original size (both overall and detail dimensions), shape, design and pattern created by the windows should be retained. Double glazing may be acceptable for storefront windows but may not be appropriate for multi-light windows. Muntins sandwiched between layers of glass are not appropriate. Covering over original wood frames with metal panning is discouraged; if necessary, panning should match the profile of the original frames. New window sash should not be divided into a smaller or larger number of glass lights than the original. Where the building has been altered to have several different types of windows, proposed changes should be consistent with either the predominant window pattern of the building or the original historic pattern.

WINDOW OPENINGS: Avoid enlarging or closing down the original opening to fit new window sizes. If an original opening is presently blocked, consider restoring it. If lowered ceilings inside are necessary, consider pulling the dropped ceiling back from the window to preserve the shape of the original opening (use either a vertical or sloped soffit). New openings are discouraged. See Section 411 of the Zoning Ordinance for transparency requirements for storefront windows.

WINDOW PATTERNS: Maintain or reinforce the original pattern created by upper story windows. If the windows are now concealed, consider exposing them to reveal the original pattern.

STORM WINDOWS: Exterior combination storm windows should have a minimum visual impact. Storm sash should have a narrow perimeter framing and the meeting rail should align with those of the primary window. Storm windows should be painted to match the color of the window sash; unpainted raw aluminum is discouraged. Interior storm windows are encouraged.

New York City

Summary

A Certificate of No Effect can be issued if the solar panels are either not visible or minimally visible from a public thoroughfare. All other requests are heard by the Commission and evaluated on a case by case basis.

NEW YORK CITY

to be removed to perform such work has been submitted to the Commission; and

(e) if the applicant is not a public or quasi-public agency, an escrow agreement or other adequate assurance acceptable to the Commission is provided to establish that a mechanism is available for the removal of the installation upon expiration of the permit should the applicant fail to remove the installation.

§2-19 **Proposed Construction of Rooftop Additions.**

(a) *Definitions.* As used in this section, the following terms shall have the following meanings:

Demolition. "Demolition" shall mean dismantling or razing of all or part of an existing improvement.

Improvement. "Improvement" shall mean any building, structure, place, work of art or other object constituting a physical betterment of real property, or any part of such betterment.

Landmarks Law. "Landmarks Law" shall refer to New York City Charter §3020 and chapter 3 of title 25 of the Administrative Code of the City of New York.

Landmarks Preservation Commission. "Landmarks Preservation Commission" shall mean the Landmarks Preservation Commission acting in its agency capacity to implement the Landmarks Law.

Mechanical equipment. "Mechanical Equipment" shall include, but not be limited to, heating, venting and air conditioning equipment, alternative or distributed energy equipment, such as solar panels, wind turbines or micro-turbines; watertanks and their supporting structures; stair and elevator bulkheads; screens, dunnages, baffles and other accessory installations; and satellite dishes, but shall not include telecommunication equipment and conventional television antennas. For the purpose of this rule, mechanical equipment shall also include unenclosed decks, garden trellises, or associated railings.

Minimally visible. "Minimally visible" shall refer to any rooftop addition which when viewed from any public thoroughfare, projects into the maximum line of sight from such public thoroughfare by not more than 12 inches in height, or, due to its placement and size does not call attention to itself nor detract from any significant architectural features.

Occupiable space. "Occupiable space" shall mean a room or enclosure and accessory installations thereof, which are intended for human occupancy or habitation.

Permit. "Permit" shall mean any permit other than a notice to proceed issued by the Landmarks Preservation Commission in accordance with the Landmarks Law:

(a) "PMW" shall mean Permit for Minor Work as defined by §25-310 of the Landmarks Law.

(b) "CNE" shall mean Certificate of No Effect as defined by §25-306 of the Landmarks Law.

(c) "CofA" shall mean Certificate of Appropriateness as defined by §25-307 of the Landmarks Law.

Public thoroughfare. "Public thoroughfare" shall mean any publicly accessible right of way including, but not limited to a street, sidewalk, public park, and path.

Rooftop addition. "Rooftop addition" shall mean a construction or an installation of mechanical equipment and/or occupiable space situated on any structure's roof.

Significant architectural feature. "Significant architectural feature" shall mean an architectural component of a building that contributes to its special historic, cultural and aesthetic character, or that in the case of an historic district reinforces the special characteristics for which the district was designated.

Terms not otherwise defined in this section shall have the meaning given them in the Landmarks Law.

(b) *Applications for proposed work.* Each application filed with the Landmarks Preservation Commission for proposed construction of a rooftop addition shall be accompanied by:

(1) documentation, including photographs, which accurately depicts the site of a proposed rooftop addition; and

(2) sightline studies for the purpose of determining the visibility of the rooftop addition from a public thoroughfare including the point of maximum visibility (see supplementary instructions for filing for rooftop additions); and

(3) mechanical equipment with respect to any application for rooftop additions for occupiable space, a current objections sheet from the Department of Buildings.

(c) *Mechanical equipment rooftop additions to be constructed on a structure which is an individual landmark.*

(1) The Landmarks Preservation Commission shall issue a CNE for any rooftop addition to be constructed on a structure which is an individual landmark of six stories or less in height which:

(i) consists solely of mechanical equipment; and
(ii) does not result in damage to, or demolition of, a significant architectural feature of the roof of the structure on which such rooftop addition is to be constructed; and
(iii) is not visible from a public thoroughfare.

(2) The Landmarks Preservation Commission shall issue a CNE for any rooftop addition to be constructed on a structure which is an individual landmark of seven stories or greater in height which:

(i) consists solely of mechanical equipment; and
(ii) does not result in damage to, or demolition of, a significant architectural

feature of the roof of the structure on which such rooftop addition is to be constructed; and
(iii) is either not visible from a public thoroughfare or is only minimally visible from a public thoroughfare.

(d) *Occupiable space rooftop additions to be constructed on a structure which is an individual landmark.*

(1) The Landmarks Preservation Commission shall issue a CNE for any rooftop addition to be constructed on a structure that is an individual landmark if the rooftop addition:

- consists of occupiable space; and
- is no more than one story with a height of no more than 11 feet as measured from the roof of the structure on which such rooftop addition is to be constructed; and
- is set back at least 3 feet from the plane of the rear façade; and

(iv) does not result in damage to, or demolition of, a significant architectural feature of the roof of the structure on which such rooftop addition is to be constructed; and
(v) is not visible from a public thoroughfare; and
(vi) has no outstanding objection for use or bulk listed on the objections sheet for such structure; and
(vii) the structure on which such rooftop addition is to be constructed does not have a grandfathered rear yard addition or enlargement, a rear yard addition or enlargement approved by the staff pursuant to section 2-16, or a rear yard addition or enlargement approved by the Commission.

(e) *Rooftop additions to be constructed on any structure within a designated historic district, other than an individual landmark.*

(1) The Landmarks Preservation Commission shall issue a CNE for any rooftop addition to be constructed on any structure within a designated historic district, other than an individual landmark, which:

(i) consists solely of mechanical equipment; and
(ii) does not result in damage to, or demolition of, a significant architectural feature of the roof of the structure on which the rooftop addition or installation is to be constructed
(iii) is either not visible from a public thoroughfare or is only minimally visible from a public thoroughfare.
(iv) does not adversely affect significant architectural features of adjacent improvements.

(2) The Landmarks Preservation Commission shall issue a CNE for any rooftop addition to be constructed on any structure within a designated historic district, other than an individual landmark, which:

(i) consists of occupiable space; and
(ii) is no more than one story with a height of no more than eleven feet as measured from the roof of the structure on which such rooftop addition is to be constructed; and
(iii) the rooftop addition is set back at least three feet from the plane of the rear façade; and
(iv) does not result in any damage to, or demolition of, a significant architectural feature of the roof of the structure on which it is constructed; and
(v) is not visible from a public thoroughfare; and
(vi) does not adversely affect significant architectural features of adjacent improvements; and
(vii) has no outstanding objection for use or bulk listed on the objections sheet for such structure and
(viii) the structure on which such rooftop addition is to be constructed does not have a grandfathered rear yard addition or enlargement, a rear yard addition or enlargement approved by the staff pursuant to section 2-16, or a rear yard addition or enlargement approved by the Commission.

(f) The Landmarks Preservation Commission shall consider any application for a proposed rooftop addition that does not meet the criteria for a CNE set forth above as a request for a CofA and shall hold a public hearing on such application.

(g) *Applicability.* (1) This rule shall not be construed to apply to telecommunications equipment or conventional television antennas.

(h) *Application Procedure.*

(1) All applications received by the Landmarks Preservation Commission will be docketed and reviewed for completeness. The applicant will be notified if additional documentation is required.

(2) When the application is complete, a staff member will review the application for conformance with these rules. Upon determination that the criteria of the rules have been met, a CNE will be issued.

(3) If the criteria for a CNE have not been met, the applicant will be given the opportunity to pursue a Certificate of Appropriateness and may request a meeting with the director of preservation to discuss the interpretation of the rules. The applicant may also request a

meeting and review by the chair of the commission.

(4) The decision of whether to approve an application for a Certificate of Appropriateness is made by an affirmative vote of at least six commissioners following a public hearing.

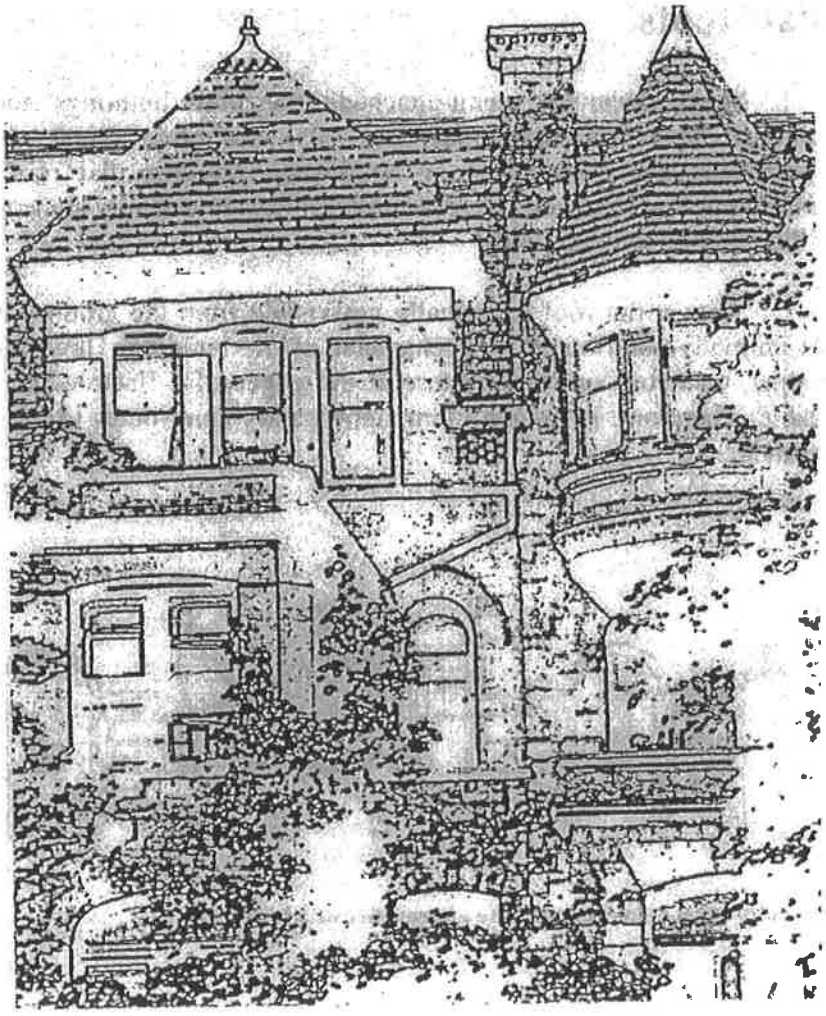
Washington, D.C.

Summary

If solar panels are proposed for a sloped roof, they should be installed on roof slopes that are not visible from the public right-of way.

District of Columbia
Historic Preservation Guidelines

ROOFS ON HISTORIC BUILDINGS



Adrian M. Fenty, Mayor
David Maloney,
DC State Historic Preservation Officer

Government of the District of Columbia
Office of Planning
Historic Preservation Office
1100 4th Street, SW Ste, E650
Washington, DC 20024
202-442-8800
planning.dc.gov/hp

Design of Roofs

Roofs are one of the most important features of historic buildings. Functionally they shelter buildings from the weather. Visually their shape, elements, details and materials can significantly contribute to the appearance of buildings. In addition, roofs may also be subject to change, such as when heating and air conditioning (HVAC) systems, decks, mechanical penthouses and the like, are added to them.

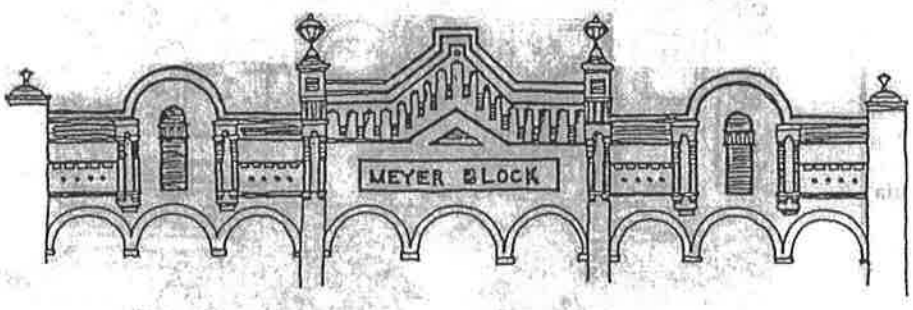
Roof Shapes

The two primary shapes of roofs on historic buildings in Washington are flat and sloped. The design of a roof shape is based on a number of considerations including the building's height, use, wall materials and structural elements.

Flat Roofs

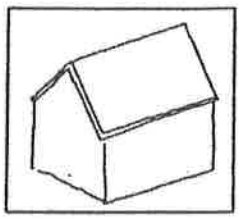
Most rowhouses, semi-attached residential buildings and commercial buildings have flat roofs. Flat roofs also are often found on institutional, government and other types of buildings. The term flat roof is somewhat misleading. Flat roofs are rarely absolutely flat, they usually slope toward the rear of the building to drain water.

Since a flat roof is typically not visible from the ground, its design does not normally contribute to the character of the building. However, the cornice, parapet, pent roof or other feature at the edges of a flat roof is almost always visible. Therefore, its design often significantly contributes to the character of a building.

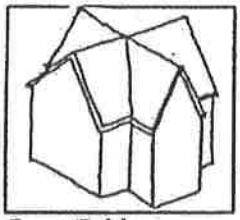


A cornice often contributes to the appearance of a building.

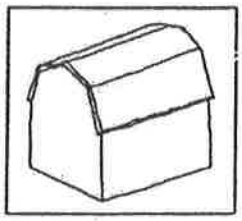
Types of Sloped Roofs



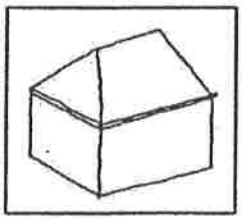
Gable



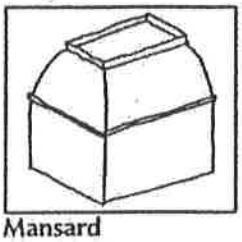
Cross Gable



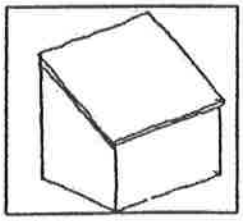
Gambrel



Hipped



Mansard



Shed

Sloping Roofs

Historic free-standing buildings typically have sloped roofs which are found in a wide variety of shapes.

Gable

The most commonly found sloping roof on residential buildings is a gable roof. This type of roof is formed by two sloping planes rising from the side walls, meeting at a central ridge. The junction between the sloping planes and the walls often contains overhanging eaves. The roof's gable ends are sometimes finished with wood bargeboards or other decorative features.

Cross Gable

A cross gable is formed by the intersection of two gables, usually at the center of the roof. Typically, this type of roof is found on residential buildings that have T -shaped, l-shaped or cross-shaped floor plans.

Gambrel

A gambrel roof is similar in design to a gable roof. However, rather than having a single ridge at the peak, a gambrel roof has three ridges, one at the peak and two along the sloping sides. This roof form is often found on residential buildings with finished attics.

Hipped

A hipped roof is formed by four sloping roof planes extending from the walls to a ridge. Hipped roofs will often have overhanging eaves on all four sides.

Mansard

A Mansard roof has steeply sloping planes extending from in a flat roof. Named after the French architect Francois Mansard, the roof provides a large amount of usable space in the attic.

Shed

Shed roofs are formed by a single sloping plane rising from one wall to the opposite wall. Typically, shed roofs are found on secondary buildings, such as residential garages or sheds.

Roof Elements and Details

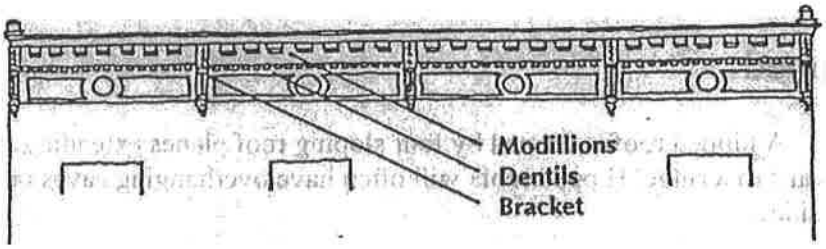
In addition to its shape, the elements and details found on a historic roof significantly contribute to its design. Some of the most commonly found roof elements and details include cornices, parapets, pent roofs, eaves, dormers, towers, chimneys, finials, cresting, gutters and downspouts.

Cornice

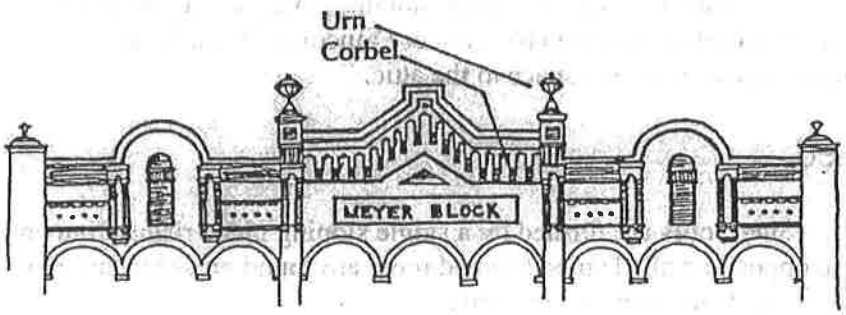
The front elevation of rowhouses and other attached, flat roof buildings usually contain a cornice. On free-standing flat roof buildings, the cornice may extend around all sides of the building. In addition to providing a visual terminus to the top of the wall, a cornice helps to make the junction between the wall and roof weather-tight.

Cornices are commonly designed in a number of styles, employing different details and materials. For example, Italianate cornices contain elaborate brackets, modillions and rows of dentils constructed of wood or sheets of tin, zinc or other metal. Cornices on Queen Anne style buildings commonly contain elaborate brick corbels and sheet metal finials or sometimes urns. Classical and Romanesque cornices may be made of metal, stone or brick and sometimes employ terra cotta details.

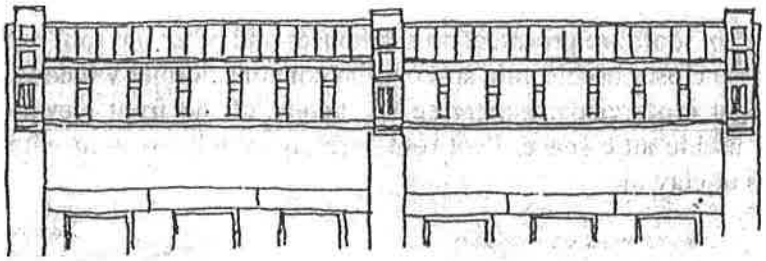
Examples of Cornices found on Historic Flat Roof Buildings



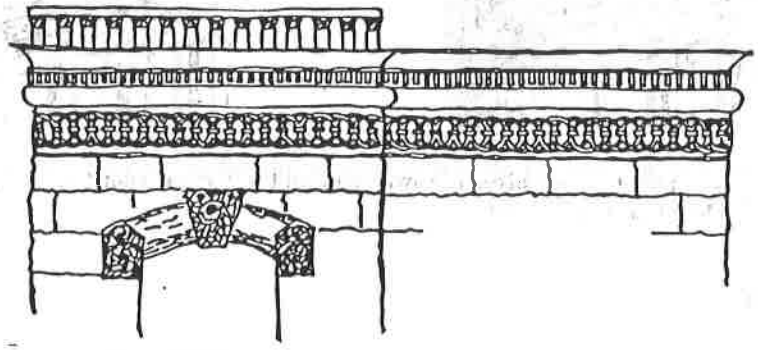
Italianate wood cornice



Queen Anne brick cornice



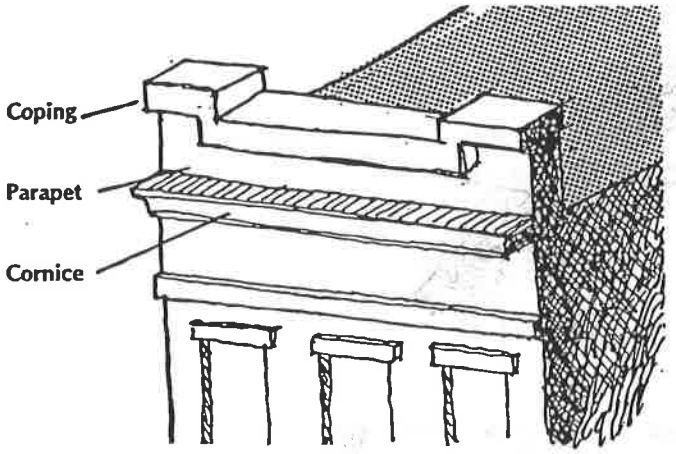
Classical metal cornice



Romanesque stone cornice

Parapet

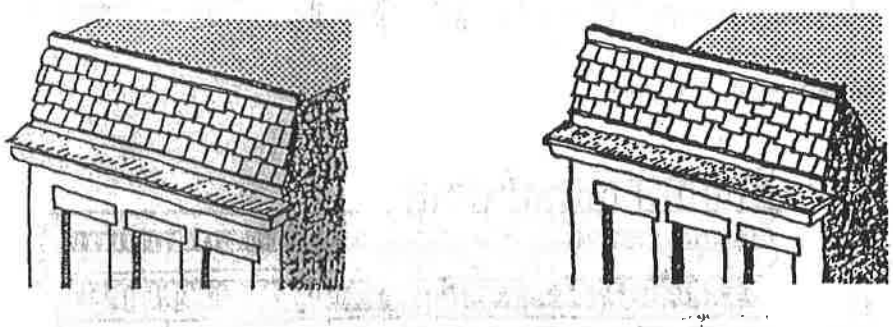
Parapets are commonly found on flat roof commercial and residential buildings. Far less elaborate in design and detail than cornices, parapets give a building greater visual height, as well as helping to provide a weather-tight junction between the roof and wall. Parapets often have plain or decorative caps, called copings, made of stone, pre-cast concrete, metal or tile.



Parapets are commonly found on flat roof commercial or residential buildings.

Pent Roofs

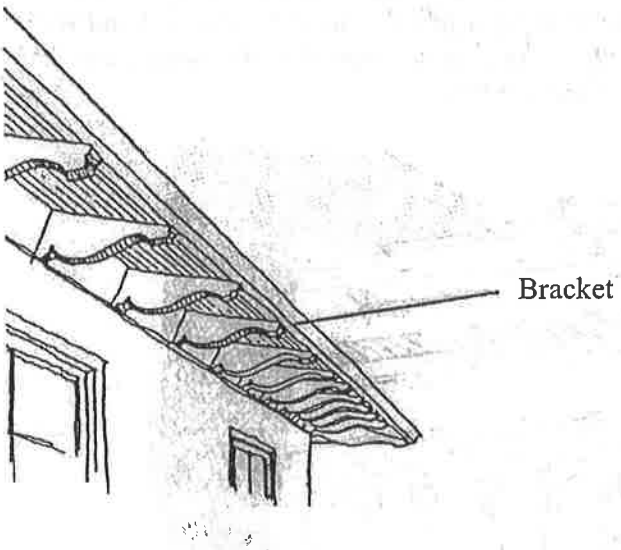
Pent roofs are prevalent on rowhouses and other flat roof buildings. A pent roof that encloses usable attic space often contains dormer windows or attic vents. Other pent roofs visually increase the height of the front elevation but do not enclose usable attic space. Pent roofs are commonly covered with slate, asphalt shingles or clay tile.



Pent roofs are prevalent on historic rowhouses and other flat roof buildings. They may or may not enclose usable attic space.

Eave

The portion of a sloped roof extending beyond a wall is called an eave. Functionally it serves to protect the upper wall from rain and snow and provides a place to attach gutters. Visually, the eave creates a transition between the vertical wall and the sloping planes of a roof. Eaves are usually made of wood, sometimes decorated with brackets or other details.



An eave visually terminates the top of a wall.

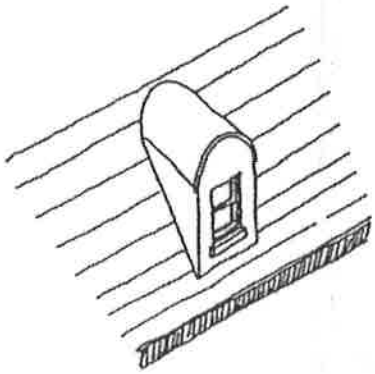
Dormer

A dormer is a small projection above a sloping roof consisting of a window or vent and a small roof. Windows in dormers are commonly double-hung or casement and less commonly diamond, round and half-round. Vents are commonly rectangular, round or half-round in shape.

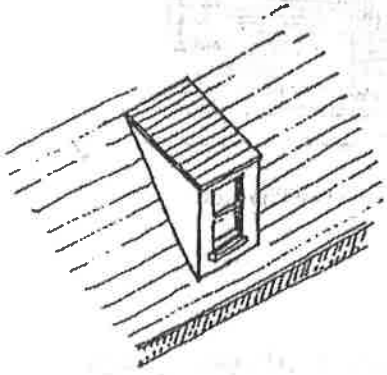
Both dormer windows and vents are capped with a variety of roof shapes: typically gable, hipped, shed, or round. A particular type of dormer, commonly found on residential buildings, is called an engaged dormer. The front of the dormer is designed as an extension of the wall below, almost always using the same materials as the wall.

1) See Windows and Doors for Historic Buildings for more information on dormers and vents.

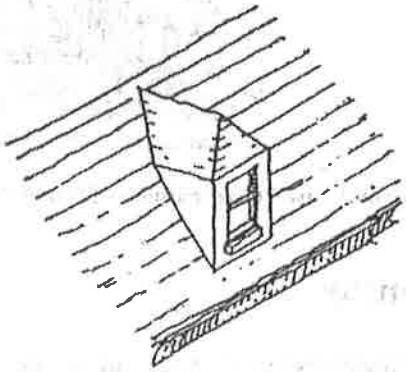
Examples of Dormer Windows



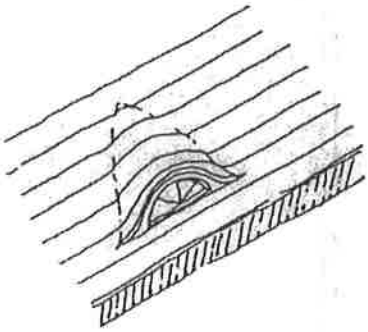
Rounded



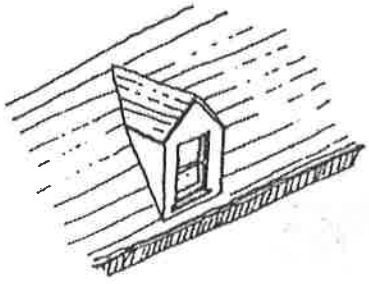
Shed



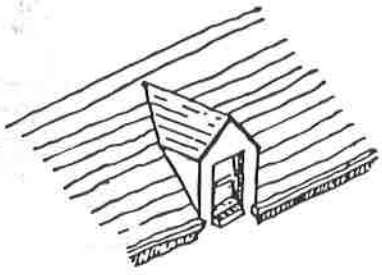
Front Gable



Eyebrow



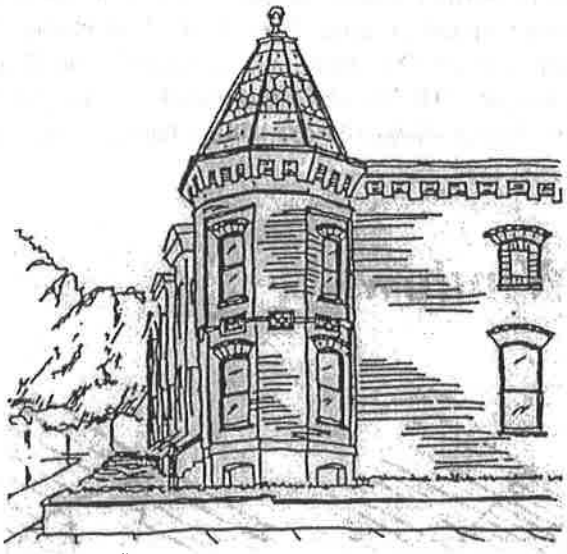
Hipped



Engaged

Towers

Towers are prominent character-defining features of many roofs in Washington's historic districts. On rowhouses, towers are often located on top of projecting bays to provide rhythm along the street, or to accentuate the end of a block. Towers are often terminated by pedimented, Mansard, conical, pyramidal or flat roofs.



Towers are often used to accentuate the end of a block of rowhouses.

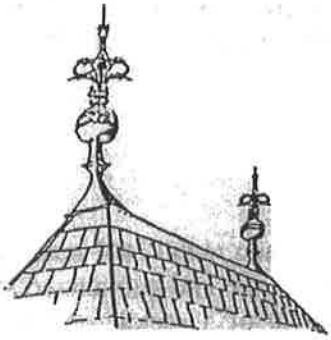
Chimney

Chimneys are often prominent character-defining elements on free-standing residential buildings. Chimneys are commonly made of brick, although stone and stucco are sometimes used. A chimney may be located on the front, side or rear walls projecting above the eave, or through roof slopes or ridges.

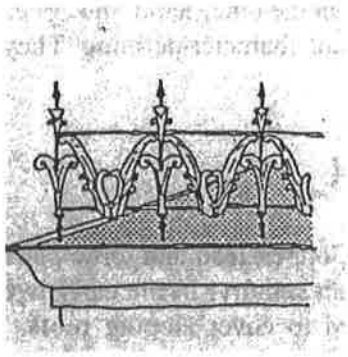
Chimneys are character-defining elements of many historic residential buildings.

Finials and Cresting

Finials and cresting, sometimes found on historic buildings, provide important decorative elements for roofs. Both are usually made of metal, although finials of stone and other materials are also found.



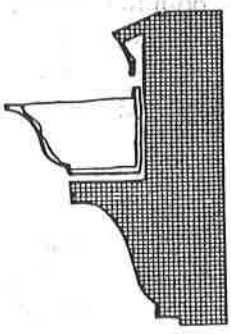
Finials are usually located on roof ridges or towers.



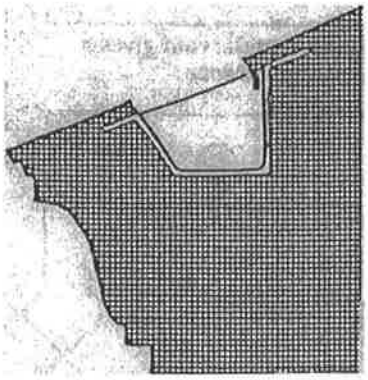
Cresting is used to add character to a cornice or ridge.

Gutters and Downspouts

Gutters and downspouts are the primary means of channeling water from the roof to the ground or directly into storm sewers. Properly maintained gutters and downspouts are critical to providing a watertight building. Their design is often important to the appearance of a building. Historically, exterior gutters and downspouts were made of copper and galvanized steel. Internal gutters are often constructed of terne plate, lead or copper.



External gutters are attached to eaves of sloping roofs.



Internal gutters are located within eaves of sloping roofs.

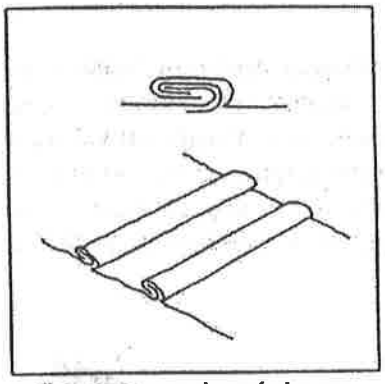
Roof Materials

In addition to the shape, elements and details, the materials used to cover sloping roofs are important to defining the character of a historic building. The most commonly found sloping roof materials are metal, slate, clay tile, asphalt shingles, wood shingles and wood shakes.

On the other hand, the appearances of materials used to cover flat roofs are usually not character defining. They include built-up roofing and rubber roofing.

Metal

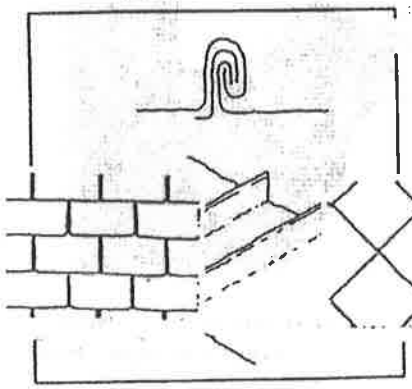
Copper, lead and terne plate (2) were common metal roof materials in the nineteenth century. In the early twentieth century, zinc and galvanized steel were also used to cover sloping roofs. The appearance of a metal roof is primarily derived from the type of metal used, how it is finished and the method by which sections are joined together. For example, copper is usually left unpainted, naturally weathering to a green patina. Similarly, lead is usually unpainted, weathering to a soft gray. All other types of metal roofing are painted to resist



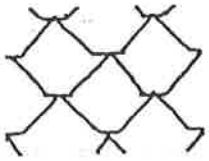
A flat-seam metal roof gives a uniform appearance.

tions joined together on site. The two types of
m and raised- seam. (3) The first gives a roof a
am give a roof a distinctive ribbed appearance.
shingles of varying shapes, sizes and textures
d early twentieth century buildings.

of material in both the nineteenth and twentieth
uses with pent roofs as well as some free-
e slate roofs. Slate is found in many shapes,
nd hexagonal, and in a variety of colors

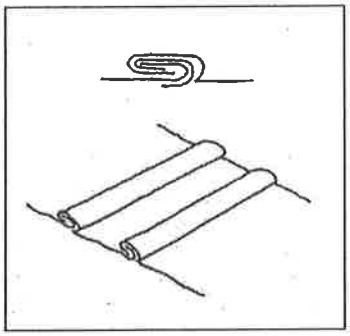


A raised-seam metal roof gives a distinctive ribbed appearance.

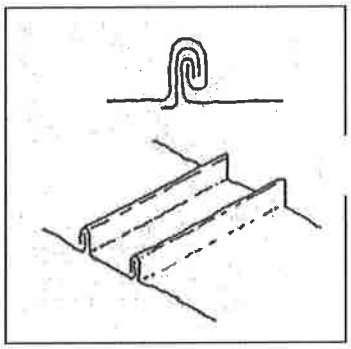


ond Hexagonal

ning feature of many sloping roofs.



A flat seam metal roof gives a uniform appearance.

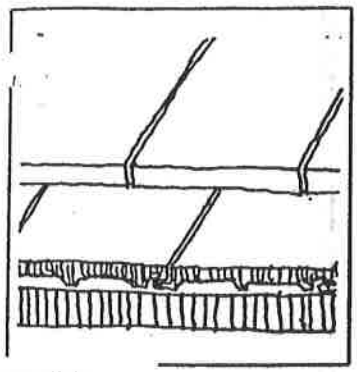


A raised-seam metal roof gives a distinctive ribbed appearance.

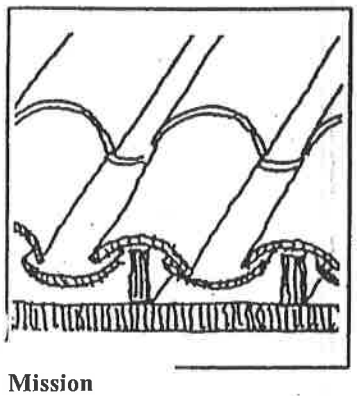
2) A terne place roof is commonly referred to as a "tin" roof, after the principal metal used in its manufacture.

3) Also called standing-seam.

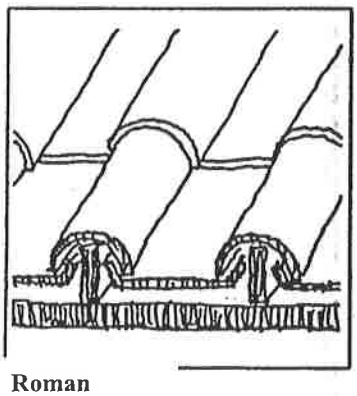
Examples of Clay Tiles



English



Mission



Roman

Clay Tile

Clay tile is commonly found in a variety of shapes including English, mission, French, Roman, rounded and barrel. It's also found in a variety of colors with red, green and gray being the most common. Tile is often found on sloping roofs of turn-of-the-century free-standing residential buildings and pent roofs of rowhouses. It may also be found on commercial, institutional and government buildings.

Asphalt Shingles

In the late nineteenth century, asphalt shingles were introduced as an inexpensive roofing material. By the mid-twentieth century, asphalt shingles became the most commonly used material for sloping roofs. Asphalt shingles come in a variety of shapes with rectangular, diamond and hexagonal being the most common. Asphalt shingles may be red, green, gray or black

Wood Shingles and Shakes

Less common, but still found on sloping roofs of historic buildings, are wood shingles and shakes. Wood shingles are machine cut and thus have a smooth surface. Shakes are split by hand or machine and have a rougher texture. Typically made from cedar, wood shakes and shingles are left unpainted, weathering to a silver-gray.

Built-up and Rubber Roofing

Built-up and rubber roofing are used to cover flat roofs. Built-up roofing is traditionally made of two or three layers of felt, tar and gravel. (4) The felt and tar act as the watertight barrier while the gravel functions as ballast to ensure that the roof does not lift during high winds. Modem flat roofs may use a single membrane system commonly referred to as a rubber roof. Because flat roofs are normally not seen, their materials are usually not considered to be character defining.

Roof Alterations

Altering roof shapes, materials, elements and details will affect their design. Thus, any alterations must be undertaken with extreme care to ensure that the character of the roof is retained. Before proceeding with any roof alteration the owner of a historic building should consult with the Historic Preservation Office.

4) The number of layers, or plys, of felt gives a built-up roof its common name. Thus, one made of two layers is called a "two-ply" built-up roof while one made of three layers of felt is called a "three-ply" roof.

Changing the Shape of a Roof

Rarely is it appropriate to change the shape of an existing roof. To do so almost always drastically alters the character of a historic building. If, for compelling functional or economic reasons, the shape of the roof must be changed, it should be done in such a manner as to retain the historic character of the building.

Insulating a Roof

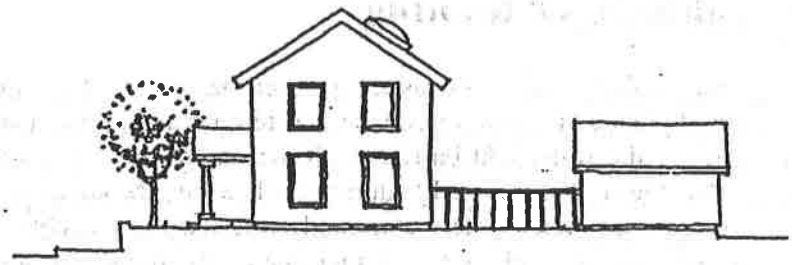
Roofs are sometimes insulated to reduce energy consumption. The location of roof insulation rarely affects the appearance of a building and thus will usually not alter its character. However, adding insulation may cause roof materials to deteriorate if it is not properly installed.

Adding TV Antennas and Satellite Dishes

Adding television antennas and satellite dishes to a roof will almost always be incompatible with its historic character. Thus, if they must be added, they should be located so they are not visible from a public street.

Adding Skylights and Dormers

Adding skylights or dormers to existing roofs is often considered by building owners who wish to finish an attic. If dormers are added to sloping roofs, they should be located on non-character-defining slopes and be designed to be compatible with the character of the building. Skylights added to sloping or flat roofs should be located so that they are not visible from a public street.



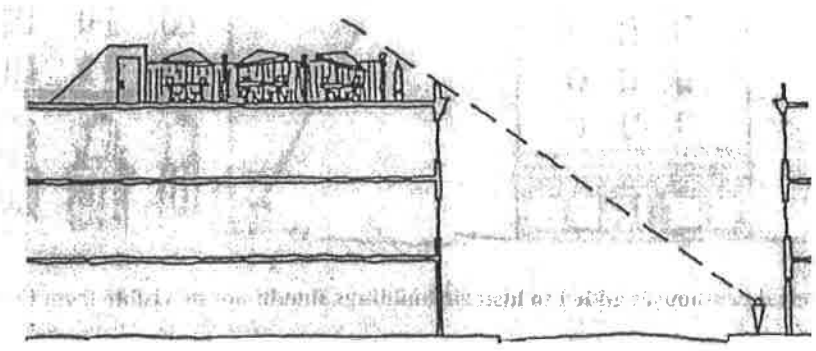
If a skylight is added it should be located on a non-character-defining slope.

Adding Solar Panels

Owners sometimes consider adding solar panels as part of an overall energy efficiency plan for their building. If installed on a flat roof, solar panels should be located so they are not visible from the public street. If located on a sloping roof building, they should only be installed on rear slopes that are not visible from a public street.

Adding Roof Decks

Adding a deck to the roof of a historic building is very difficult without altering its character. Adding a deck will also affect the roof's drainage and structure. If a roof deck must be added, it should be located so it is not visible from the street. If this is not possible, the design of the portion of the deck visible from the street should be compatible with the proportion, scale, materials, color and other character-defining elements of the building.



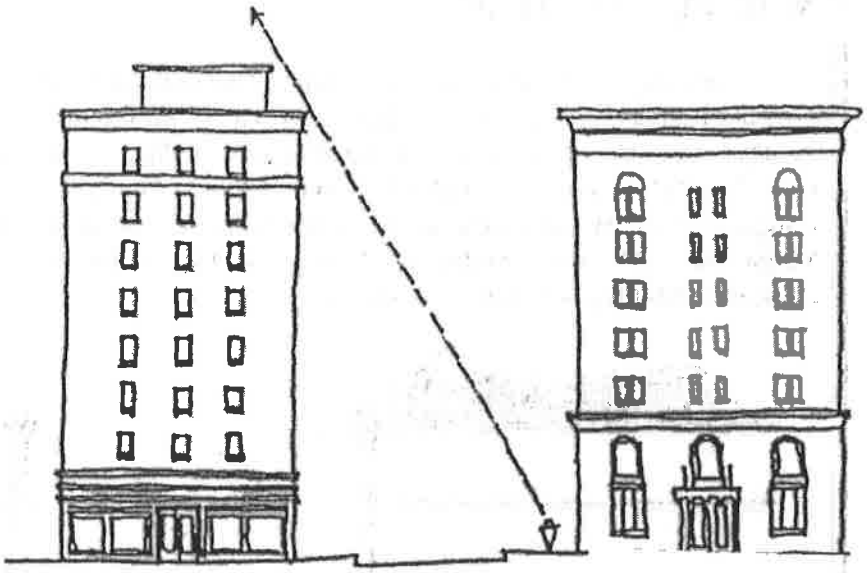
Decks should be located so they cannot be seen from the street.

Adding HVAC Equipment

Heating, ventilating and air conditioning (HVAC) equipment is often added to roofs of existing historic buildings during rehabilitation. Typically the roof is the most economical and technically appropriate location for the equipment. HVAC equipment should be located so that it is not visible from a public street. If this is not possible, the equipment should be screened from view. The screen should be designed to be compatible with the proportion, scale, materials, color and other character defining elements of the building.

Altering or Adding Mechanical Penthouses

Mechanical penthouses are found primarily on multi-story residential, commercial, institutional and government buildings. They are designed to enclose elevator and other building equipment. Alterations to existing penthouses should be compatible with the original design if they can be seen from a street. If a new mechanical penthouse is added, it should be located as far as possible behind the primary facade, so that it is not visible from the street. If this is not possible, the penthouse should be designed to be compatible with the proportion, scale, materials, color and other character defining elements of the building.



Mechanical penthouses added to historic buildings should not be visible from the street.

Maintaining, Repairing and Replacing Roofs

Roof materials, elements and details are subject to many forms of deterioration caused by rain, snow, hail, wind or pollutants. Sometimes roofs are also subject to deterioration caused by insects, foot-traffic, vegetation, birds, squirrels and other animals.

Building owners should regularly inspect and maintain existing roof materials, elements and details. Inspecting a sloping roof can easily be accomplished from the ground with binoculars. Most flat roofs are accessible and thus can be closely inspected. When deterioration is detected, the building owner should consult with a roofer or an architect knowledgeable in historic roofs, or with the Historic Preservation Office, to determine the best course of action.

In most cases consideration should first be given to maintaining the existing material, element or detail. If this proves not to be technically or economically feasible, repairing only the deteriorated areas, using in-kind materials should next be considered. If the deterioration is more extensive, replacing the entire roof material, element or detail in-kind may then be considered. Only after repair or replacement in-kind has been determined not to be technically or economically feasible should the owner consider using a substitute material.

Metal

Metal is subject to pitting and abrasion due to wind-born grit and pollutants. Painted metal roofs, such as terne plate, zinc, and galvanized steel are subject to the same problems, as well as to corrosion caused by improperly maintained paint. Minor corrosion may be removed by wire brushing and repainting. More extensive corrosion, as well as pitting and abrasion may require replacing the deteriorated sections with the same type of metal. If the deterioration is extensive, the entire roof membrane should be replaced by a metal roof that duplicates the character of the existing.

Slate

Slate is one of the most robust roof materials. Typically, a slate roof will last fifty years or more. However, slate is subject to cracking, usually caused by hail or falling tree limbs. Slate may also become detached from its decking due to corrosion of its anchors. Replacement slate can be obtained readily in a wide range of shapes and colors to match an existing roof.

Clay Tile

Clay tile is also a long-wearing roof material. However, it may crack or anchors may deteriorate. Replacement clay tile, to match an existing roof, is readily available in many shapes and colors, or it may be made to order.

Asphalt Shingles

Asphalt shingles are subject to abrasion and lifting from wind, as well as puncture from hail and falling tree limbs. Typically, good quality asphalt shingles will last twenty years before they require replacement Fortunately, except for some early twentieth century asphalt shingles, most of the sizes, shapes and colors of asphalt shingles found on historic roofs can be obtained today.

Wood Shingles and Shakes

Wood shingles and shakes are subject to rot, detachment and insect infestation. Deteriorated sections should be removed and replaced in-kind.

Built-up Roofing

Built-up roofing is subject to cracking, delamination of the felt layers and thinning of the gravel ballast.(5) Minor cracking can often be

5) Cracking is also known as alligatoring.

repaired by applying roofing tar to the affected area. More extensive cracking may require that the affected section be removed and new built-up roofing installed. If the gravel is thin, a new layer of tar and gravel should be applied. If the built-up roofing is extensively deteriorated, or is more than twenty years old, the building owner should investigate replacing the entire membrane.

Brick and Stone Cornices, Elements and Details

Brick and stone may erode because of wind-borne grit or pollutants. If the erosion is not extensive, the affected brick or stone should be left in place. A consolidate may be used to halt or slow further deterioration. If the deterioration is pronounced, particularly if it threatens the structural integrity of the cornice, element or detail, the brick or stone should be replaced in-kind.

The mortar joints of brick and stone may also deteriorate. If this occurs, the joints should be repainted using mortar of the same sand, lime and cement content as the existing mortar. The new mortar should also match existing in color and profile. (6)

Metal and Wood Cornices, Elements and Details

Metal cornices, elements and details may be pitted or abraded by wind-borne grit or pollutants, corrode or become detached due to deterioration of anchors and connectors. Brushing and repainting can repair light corrosion. Heavy corrosion and pitting may require that the affected area be removed and replaced in-kind.

Wood cornices, elements and details often deteriorate because paint is not maintained. They are also subject to rot and insect infestation. Minor rot or damage by insects maybe repaired by using epoxy or another suitable injected material, or scabbing- in new wood. In both cases, the repair should be detailed in the same manner as the existing. In cases of extensive deterioration, the entire cornice, eave or detail may need to be replaced in-kind or in a compatible substitute material.

6) For further information on brick, stone and mortar, see *Walls and Foundations for Historic Buildings.*

Substitute Materials

If it is not technically or economically feasible to repair or replace existing roofing materials, elements or details in-kind, than a compatible substitute material should be used. When selecting a substitute material, building owners should pay particular attention to the material's expansion, contraction and weathering properties as well as its chemical properties. Since materials expand and contract at different rates due to temperature changes and sunlight falling on surfaces, installing a new material with very different expansion and contraction properties than the original may cause joints between the new and existing materials to fail. A substitute material also may react chemically with adjacent historic materials causing the substitute or historic material to rapidly deteriorate.

Substitute Materials

The following substitute materials may be appropriate for replacement of historic roofing materials. Before proceeding with a substitute material, building owners should consult with the Historic Preservation Office.

Historic Material	Substitute Material
Flat Roof Membrane	
-Built-up (felt, tar, and gravel)	-Single-ply (rubber)
Sloping Roof Membrane	
-Copper, lead, terne plate-	-Aluminum
-Zinc, steel	
-Slate	-Synthetic slate
Eaves, Cornice and Parapet	
-Wood	-Fiberglass
-Metal	-Fiberglass
-Stone	-Pre-cast concrete
Flashing	
-Copper, lead, galvanized steel	-Aluminum
Gutters and Downspouts	
-Copper, lead	-Aluminum
Dormers	
-Wood	-Fiberglass

The District of Columbia Historic Preservation Guidelines were developed under a grant from the Historic Preservation Division, Department of Consumer and Regulatory Affairs, Government of the District of Columbia. They were funded in part by a grant from the United States Department of the Interior, National Park Service. The United States Department of the Interior prohibits discrimination on the basis of race, color, sex, national origin, or handicap. If you believe that you have been discriminated against in any program, activity or facility in this program, or if you desire further information please write to: Director, Office of Equal Opportunity, National Capital Region, National Park Service, U.S. Department of the Interior, 1100 Ohio Drive, S.W., Washington, D.C. 20242, (202) 619-7020. AN EQUAL OPPORTUNITY EMPLOYER M/F/H.

(updated: 3/31/2010)

Boston, MA

Summary

Solar collectors should be set back out of view from the public right-of-way.

HISTORIC BEACON HILL DISTRICT ARCHITECTURAL GUIDELINES

The Historic Beacon Hill District, the oldest historic district in Massachusetts, originated in 1955 by an act of the Massachusetts General Court (Chapter 616 of the Acts of 1955, as amended). It has since been extended to include virtually the entire Hill. The purpose of the law is:

- To promote the educational, cultural, economic and general welfare of the public through the preservation of the Historic Beacon Hill District, and to maintain said district as a landmark in the history of architecture and as a tangible reminder of old Boston as it existed in the early days of the commonwealth. To achieve this purpose, the statute authorizes the Beacon Hill Architectural Commission to review proposed changes to the exterior architectural features of buildings within the historic district before any alteration is undertaken and before a building permit is issued. The relevant section of the law states:
- The commission shall determine whether the proposed construction, reconstruction, alteration, change in exterior color or demolition of the exterior architectural feature involved will be appropriate to the preservation of the historic Beacon Hill district for the purposes of this act.... In passing upon appropriateness, the commission shall consider, in addition to any other pertinent factors, the historical and architectural value and significance, architectural style, general design, arrangement, texture, material and color of the exterior architectural feature involved and the relationship thereof to the exterior architectural features of other involved structures in the immediate neighborhood.

The legislation establishing the HBHD confers upon the BHAC authority to review/regulate proposed alteration, construction, reconstruction, or demolition of any exterior architectural feature within the district that is "open to view from a public way," and requires that no such work may be undertaken without first securing a Certificate of Appropriateness from the Commission. Please note:

- The viewpoint "from a public way" need not be located within the Historic District but may include such viewpoints as Boston Common, Storrow Drive, the Longfellow Bridge, and Cambridge Street and points north.

- Violations of the statute, including undertaking such work without having secured a Certificate of Appropriateness are subject to fines up to $1000 per day.

Owners contemplating changes to the exterior of any building visible from a public way within the Historic Beacon Hill district should be aware that no alteration will be approved that is inappropriate to the historical character, architectural design, and materials of the building or its setting. Furthermore, changes over time to buildings are evidence of the history of individual buildings and the neighborhood; some of these changes resulted in major modifications to the style and character of a building and shall be considered part of its historic integrity. Other changes, although not altering the dominant style of the building, may have acquired significance due to age, quality, and irreplaceability, and, if so, shall be considered part of the historic fabric of the building.

For individuals without a detailed knowledge of architectural history, it is often difficult to recognize which details are appropriate to which buildings or architectural styles. Anyone filing an application for a Certificate of Appropriateness is, therefore, encouraged to read these guidelines carefully, to consult in advance with the staff of the Environment Department or to refer to the books and articles listed at the end of these guidelines. Applications are available from the Environment Department, City Hall, Room 805 (617-635-3850) or the Beacon Hill Civic Association, 74 Joy Street (617-227-1922). Each application is considered on its individual merits, but the Beacon Hill Architectural Commission will act in accordance with the following guidelines:

A. INTRODUCTORY GUIDELINES

1. Original or historically significant materials and/or architectural features shall be maintained and repaired whenever possible rather than replaced.

2. In the event that replacement of existing materials or features is necessary, the new materials shall match the materials being replaced in composition, design, color, texture, and other visible qualities.

3. Replacement of missing architectural features shall be based on evidence of original features, substantiated by physical or pictorial information. Proposals for new work shall be based on evidence of appropriate detail with regard to size, shape, material and design.

4. All architectural changes shall be appropriate either to the original style of the building (if it has not been significantly altered) or to its altered style (if it has been significantly altered to reflect characteristics of a later style).

5. Contemporary design for new buildings may be considered if such design is of excellent quality and is compatible with the size, scale, color, materials, and character of neighboring buildings and environment.

6. All proposals shall show evidence that work will be executed with the highest quality material and workmanship.

7. New openings in facades shall not be allowed, and no changes shall be made to existing window and door openings unless they involve restoration of original features for which there is supporting documentation of the original feature.

8. Work on a single building shall take into account continuity of the architecture and the historic development of each elevation. Identical features (such as windows, lintels, shutters, paint colors, etc.) should match exactly at all stories such that the building is consistent with its architectural style or styles. It is common to find architectural differences between the main façade and secondary elevations, and such features and hierarchies should be respected.

9. Equipment such as HVAC components, solar panels or heaters, wind-energy equipment, telecommunications components, mechanical/electrical installations, parabolic, "dish" or other directional or similar communications antennae must be installed in such a manner that they are not visible from a public way.

10. The Commission will not formally review an application until all zoning issues have been resolved through the Zoning Board of Appeal.

11. A Certificate of Appropriateness is valid for two years. If work has not commenced after two years, a new application must be filed.

BACK BAY ARCHITECTURAL DISTRICT COMMERCIAL GUIDELINES

GUIDELINES FOR EXTERIOR DESIGN

COMMERCIAL DISTRICT: Newbury Street, Boylston Street, Massachusetts Avenue and the commercially-zoned segments of the district's cross streets

The Back Bay Residential District, as established under Chapter 625, Acts of 1966, was enlarged by Chapter 463, Acts of 1974 (effective August 3, 1974) to include Newbury and the north side of Boylston Street from Dartmouth Street to Massachusetts Avenue, with the intervening connecting streets, and its name was changed to the Back Bay Architectural District. The district's boundaries were subsequently expanded, under Ch. 645 of the Acts of 1979 to include Newbury Street and the north side of Boylston streets from Dartmouth Street to Arlington Street (again with the intervening cross streets). The commission's jurisdiction was further expanded to include all exterior features of a building, including alley elevations and those not visible from a public way the district's alley elevations under Ch. 624 of the Acts of 1981.

All plans for demolition or new construction or for exterior alteration or repair of existing buildings, as well as all proposals concerning the erection of signs, awnings and other features appurtenant to structures in the Architectural District, must be submitted to the Back Bay Architectural Commission (BBAC) for review and approval.

Compliance with the Zoning Code: Construction, features and signage which dimensionally or otherwise are not in compliance with the Boston Zoning Code, including Section 11, the Boston Sign Code, require a Conditional Use Permit from the Zoning Board of Appeal as a prerequisite to BBAC review.

These guidelines, a supplement to the "Guidelines for the Residential District" adopted in 1990 (and to be known hereafter as the "Architectural Guidelines"), apply to the special needs of businesses for changes to existing structures in the business zone—Newbury Street, the north side of Boylston Street (from Arlington Street to Massachusetts Avenue) and the commercially zoned segments of the district's cross streets.

include such simple expedients as the installation of storm windows to reduce drafts in the winter and awnings to limit heat gain in the summer. Low-emissivity ("low-E") glazing may be appropriate if clear and not unduly reflective. Efficient mechanical equipment is generally more compact, easing its visual relationship to the historic context. As with any other rooftop mechanical system, solar- or wind-powered devices should be located out of view from below. The replacement of asphalt surfaces with pervious paving systems (facilitating recharge to foundation piles) and the introduction of green roofs may offer visual as well as environmental benefit.

(*Adapted from the National Trust for Historic Preservation*)

Accessibility

Working closely with the Massachusetts Architectural Access Board (MAAB), the Back Bay Architectural Commission has long supported the introduction of access. Whenever possible, access to historic buildings should be through a primary public entrance. For example, entries whose existing thresholds are already near grade can often be modified unobtrusively; while high stoops tend to be more architecturally significant (to the extent that they occupy more of the façade), low stoops may sometimes be removed to provide access with only minor impact upon the historic fabric. If this cannot be achieved without permanent damage to major character-defining features, at least one entrance used by the public should be made accessible. If the accessible entrance is not the primary public entrance, directional signs should direct visitors to the accessible entrance. If it agrees that it is the only means of entering a building, the MAAB may accept a rear or service entrance, sometimes requiring that a dedicated accessible parking space be provided. Although conditions vary widely from building to building, within an attached rowhouse district this goal is typically complicated by the availability of only two elevations from which access may be achieved. A common solution is the alteration of grade and entry-threshold conditions. These interventions are typically both more aesthetically sensitive and more convenient to use than mechanical solutions, such as wheelchair lifts.

When it is not feasible to modify an existing entrance, it may be possible to develop a new entrance by creating an entirely new opening in an appropriate location, or by using a secondary window for an opening. This solution should only be considered after exhausting all possibilities for modifying existing front and rear entrances.

In some instances, ramps or more gently inclined walkways, which require no handrails, may make an entrance accessible. As a new feature, ramps should be carefully designed and appropriately located to preserve a property's historic character. Ramps should ideally be located at public entrances used by everyone whenever possible,

MISSION HILL TRIANGLE ARCHITECTURAL CONSERVATION DISTRICT

ARCHITECTURAL GUIDELINES
SPECIFIC STANDARDS & CRITERIA

A. GENERAL

The intent of these standards & criteria is to preserve the physical features, historical and architectural character, and residential nature of the Triangle area.

The dominant historical and architectural features of the district are the late 19th-century masonry rowhouse units. Houses within these units appear relatively uniform in size, materials, setback, and style, with the individuality of the unit being subordinate to the harmony of the street.

These standards and criteria are intended to guide the inevitable changes to the exteriors of buildings and physical features within the district, in order to ensure that changes are sensitive to the architectural character of the district, and to prevent intrusions. There is no requirement to do work that is not initiated by the owner of the property.

The most important feature of the buildings is the façades (including roofs) that face the public streets and avenues, and therefore these are subject to review. Sidewalls visible from within the district are also under review.

Any proposed changes or alterations to the elements mentioned above will be reviewed unless specifically exempted; preference will be given to alterations that maintain, preserve, or restore according to the standards and criteria for elements identified in the following sections.

B. WINDOWS AND DOORS

The original configuration of windows will be retained. No new openings in façades will be allowed unless they are re-openings of original openings. Original window and door openings will not be enlarged, framed down, or closed, with the possible exception of basement windows (subject to review). Existing non-conforming window and door openings may be altered to return to their original size, shape, and style. Greenhouse windows are not allowed on the façades.

Window Sash

All sash windows that are double hung will be retained. If replacements are necessary, they must be double hung, or appear to be double hung. Colored-, art-, or leaded-glass windows will be retained.

The original number and arrangement of lights (glass panes) will be retained. Applied exterior muntins will be allowed if they are painted and bonded to exterior surface of the glass. Non-wooden sash should have a finished color closely matching the selected trim color. Effort should be made to maintain wooden sashes whenever possible.

Sills and Lintels

Original sills and lintels should be retained and repaired, if possible. Replacement sills and lintels, when necessary, shall correspond to original elements, if possible.

Oriels

Original oriels, if existing, should be retained.

Doors

All proposed exterior changes involving replacement doors and doorways, including transoms and vestibule sidewalls, will be reviewed.

Original doors will be retained whenever possible. If replacement is necessary, the new doors will match the original as closely as possible. Non-original doors, when replaced, should be of wood or appear to be wood with

panels and double leaves. Special consideration should be given to the preservation of etched- or frosted-glass door panels. Contemporary style changes to doorways are not encouraged and are subject to review.

Original entryways and paneling will be retained.
Modern-style alterations are not encouraged and shall be subject to review. Outer transoms should not be closed in or removed.

Outer Vestibule Doors
Installation of new outer vestibule doors is subject to review. Metal-and-glass storm doors are not encouraged; if used, raw, unpainted metal is inappropriate.

Ornamentation
Original decorative moldings and stonework surrounding a window or door will be retained whenever possible. If such material is missing or so deteriorated as to require replacement, it will be replaced with an element which duplicates the mass, material texture and general form of the original. Ornamentation belonging to a different period and style of architecture is not appropriate.

Iron bars, grilles and grates on windows and doors should be as unobtrusive as possible. (See section P, "Items that are Exempted from Review")

C. STOOPS AND FRONT STAIRS

Original stoops (including stringers, risers, and treads) and steps on the main façade will be retained whenever possible. Replacements should match the original in their massing and location. Concrete colored to match other masonry trim is a preferable treatment for replacement.

Since the use of marble is frequent in the district, the replacement of deteriorated marble in kind is encouraged. Brick and/or bluestone are inappropriate materials for this architectural period. Railings, if added, should be as unobtrusive as possible. Black iron is preferable.

D. FRONT PORCHES

Original front porches should be retained and repaired whenever possible. Replacement should match original in size and location.

E. ROOFS, DORMERS, VERTICAL ADDITIONS

The original form and slope, if any, of the roof will be retained. Significant characteristics of this district are the intact cornice, mansard, and flat roof lines within units of rowhouses.

Rooftop additions visible from public ways are virtually non-existent within the district; continuation of this precedent is important. Whenever possible, existing dormers seen from a public way should be retained. Replacement of dormers should approximate the shape and placement of the original. Materials will be consistent with the original in design. Ornamental dormer trim should be retained.

Any vertical additions (penthouses, railings, solar panels, mechanical equipment) that can be seen from a public way within the district are not appropriate and will not be approved. In buildings with a pitched roof, additions may occur behind the ridge line of the roof if the vertical addition does not interrupt the roofline as seen from the front of the building. Size and placement of satellite-dish antennas will require review.

Original slate roofs visible from a public way should be retained. Replacement should be of slate, slate substitute, or dark asphalt shingles.

SOUTH END LANDMARK DISTRICT
Standards and Criteria
Revised April 27, 1999

INTRODUCTION

The statute creating the Boston Landmarks Commission (chapter 772 of the Acts of 1 of the Commonwealth of Massachusetts) requires Standards and Criteria for each district designated by the commission. These Standards and Criteria serve two purposes: one, to guide property owners in planning the rehabilitation of buildings; and two, to assist district commission in determining those architectural changes that are appropriate to district. The Standards and Criteria are not retroactive and apply only to changes proposed after the formal designation of the district. They also may not have anticipated every possible change which may be proposed.

The South End was listed on the National Register of Historic Places in 1973 as the largest urban Victorian neighborhood in the country, representing over 300 acres of land which was filled along the necklands and developed during the mid-nineteenth century. Substantially intact, the South End was designated a landmark district in 1983.

A landmark district is any area designated by the commission containing any physical features or improvements or both which are of historical, social, cultural, architectural or aesthetic significance to the city and the commonwealth, the New England region or the nation and cause such area to constitute a distinctive area of the city.

The Standards and Criteria may not have anticipated every possible change which may be proposed. For any property located within the boundaries of the landmark district, the commission must approve all exterior alterations (with the exception of those specific exemptions cited in Section O. of the Standards; also see Section P. for definition of exterior alterations). No building permit may be issued for exterior alterations unless accompanied by a certificate from the commission, and all zoning issues must be legalized before architectural review. If there are any questions regarding the standards and criteria, please contact commission staff for clarification.

Owners contemplating exterior changes to their properties should contact the commission office to file an application for design review. The commission meets once a month in a public hearing to review the applications and issues a certificate of Design Approval when it determines that the proposed work conforms to the Standards and Criteria. In rare instances, such as proven economic hardship, the commission may allow a variance from the Standards and Criteria.

Additional Standards and Criteria for commercial properties and for those within the Protection Area are available from the commission office.

It is generally recommended that deteriorated architectural elements be repaired with new material which duplicates the old as closely as possible. While alterations that intend to create an earlier appearance than that of the building are discouraged, previous changes to a building have often acquired significance and may warrant preservation.

same color as the metal sash and will only allow the panning of the original wood sill where absolutely necessary. The commission will require the use of dark jamb liners and the use of anodized spacer bars between thermal panes. Finish shall be of black anodized or enamelized paint in a color approved by the commission.

c. Vinyl or vinyl-clad windows will not be allowed.
d. Only half-window screens with dark screening and painted frames and tracks are allowed.
e. The commission will require the full replacement of any windows which are installed without a certificate of Design Approval or which do not meet the specifications of a certificate of Design Approval.

3. Sills and Lintels (See also Section C. 1.).
Window sills and lintels shall be retained and repaired. If severely deteriorated, replacements shall be of a material, arrangement, color and proportion similar to the original in appearance. Replacement sills in brick will not be approved. Decorative lintel details such as applied or incised designs should be retained.

4. Window Grilles and Iron Balconies (See also Section B.2).
Ornamental or highly decorative grilles and balconies may be allowed and will be reviewed on a case-by-case basis. (See Exemption #10 in Section O.).

E. BAYS, ORIELS AND PROTRUSIONS FROM WALL
Bays, oriels, and other similar protrusions from the exterior wall may not be removed. If altered, the design shall approximate the original; new synthetic covering materials will not be approved.

F. ROOFS (including rooflines, cornices and dormers, skylights, greenhouses, arbors, penthouses, roof fences and decks, mechanical penthouses, solar panels, and devices, and the like).

1. The original roof configuration and cornice line shall be retained. Additional floors visible from the public streets and avenues may be permissible in special circumstances provided the addition does not interrupt a contiguous row of even cornice lines. Raising or lowering the existing roofline will only be allowed for the purpose of restoring the roof to its original profile. Alterations or new construction such as greenhouses, penthouses, arbors or trellises, solar panels and devices, mechanical and electrical equipment, if visible from a public street or avenue, may be approved only on a case-by-case basis but in general are discouraged. Approval criteria shall be:
    a. placement to minimize visibility,
    b. minimizing visible mass,
    c. non-reflective dark appearance, and
    d. conformance to State Building Code Requirement.
2. Roof decks, including decking and railing, should not be visible from any public way. Partial visibility of the railing may be allowed on a case-by-case basis based on criteria listed in #1 above. Any visible railings must be black metal.
3. Skylights are never allowed on mansard roofs. Visible skylights on other roofs are discouraged, unless original to the building, but may be approved, provided that the projection is less than one foot above the roof and at least one foot back from the visible edges of the roof; framing of the skylights should also be dark and non-reflective.
4. Original dormers on roofs shall be retained and repaired or restored. Expansion of existing dormers or adding new dormers may be approved on a case-by-case basis provided designs are based on historic models.
5. Wood, masonry, and metal cornice elements shall be retained and repaired or restored.

Pittsburgh, PA

Summary

Solar panels must be installed so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining features.

HISTORIC REVIEW COMMISSION OF PITTSBURGH

DESIGN GUIDELINES:
PENN-LIBERTY HISTORIC DISTRICT

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4. Use new colors that are inappropriate to the historic building or district.

I. Roofs

The Historic Review Commission will review favorably proposals that:

1. Identify, retain and preserve roofs -- and their functional features -- that are important in defining the overall historic character of the building. This includes the roof's shape, such as hipped, gambrel and mansard; decorative features such as cresting and chimneys; and roofing materials such as slate, clay tile and metal, as well as its size, color and patterning.

2. Repair a roof by reinforcing the historic materials which comprise roof materials. Repair also will generally include the limited replacement in kind -- or with compatible substitute material -- of those extensively deteriorated or missing parts of features when there are surviving prototypes or sufficient documentation for an accurate reconstruction of the original.

3. Replace in kind an entire feature of the roof that is too deteriorated to repair -- if the overall form and detailing are still evident -- using the physical evidence to guide the new work. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

4. Design and construct a new feature such as a chimney or cupola when the historic feature is completely missing. It may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the size, scale, material and color of the historic building.

5. Install mechanical or service equipment on the roof such as air conditioning, transformers or solar collectors when required so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining features.

6. Design additions to roofs such as residential, office or storage spaces, elevator housing, decks, terraces, dormers, and skylights when required so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining features.

The Historic Review Commission will not review favorably proposals that:

1. Remove or radically change the roof or roof features which are important in defining the overall character of the building so that, as a result, the character is diminished.

2. Replace an entire roof feature such as a dormer when repair of the historic materials and limited replacement of the deteriorated or missing parts are appropriate.

3. Remove a feature of the roof that is un-repairable and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

Baltimore, MD

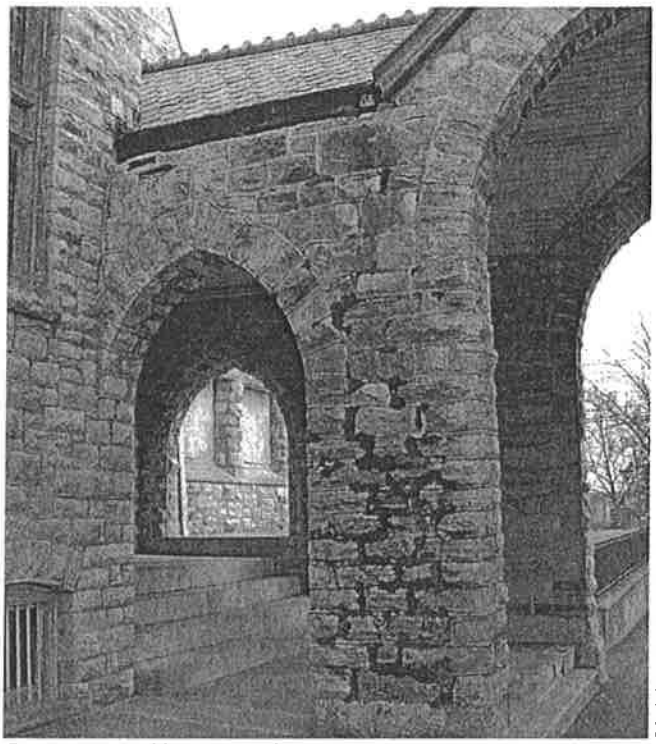
Summary

Solar panels should not be easily seen by the public.

BALTIMORE CITY HISTORIC PRESERVATION PROCEDURES AND DESIGN GUIDELINES

Adopted by
Commission for Historical and Architectural Preservation
Baltimore City Department of Planning
City of Baltimore, Maryland

Date of Adoption February 10, 2009
Date of Last Amendment January 10, 2012


John Milner Associates, Inc.

Damage caused by missing downspouts

- If built-in box gutters are to be replaced by hanging gutters, the box gutters must be roofed over and the hanging gutters attached to the fascia board at the eaves of the roof.
- Never install vinyl gutters and downspouts, which have a short life expectancy.
- Install a sufficient number of hangers to attach the gutters and downspouts securely to the roof and wall. Gutter or downspout guards may reduce the collection of organic matter in gutters and downspouts.
- Install underground drainage systems, grading, splash blocks, diverters, and/or French drains under downspouts to carry water away from the building foundation and limit soil erosion.

ROOFTOP ADDITIONS, DECKS, AND ACCESSORIES

- In most cases, rooftop additions, decks, and terraces easily seen by the public at the front of the building are not permitted in a historic district. Rooftop additions, decks, and terraces visible from a rear secondary street or alley may be approved.
- Where permitted, rooftop additions must be appropriate to the scale and character of the historic building, using matching or complementary materials, forms, and detailing. New work must not damage or visually obscure historic building fabric.
- Install skylights that are flush with the roof plane (not the "bubble" type) with frames that are match the color of the roof material. Avoid locating skylights on primary roof elevations.
- Do not install new dormers on primary elevations. If installed on secondary elevations, design new dormers to a scale that preserves the dominant form of the original roof.
- Modern rooftop elements, such as mechanical units, ducts, solar panels, antennae, satellite dishes, and vents should not be easily seen by the public.
- Paint roof vents to match the color of the historic roofing material.

8.8 PAINT AND COLOR

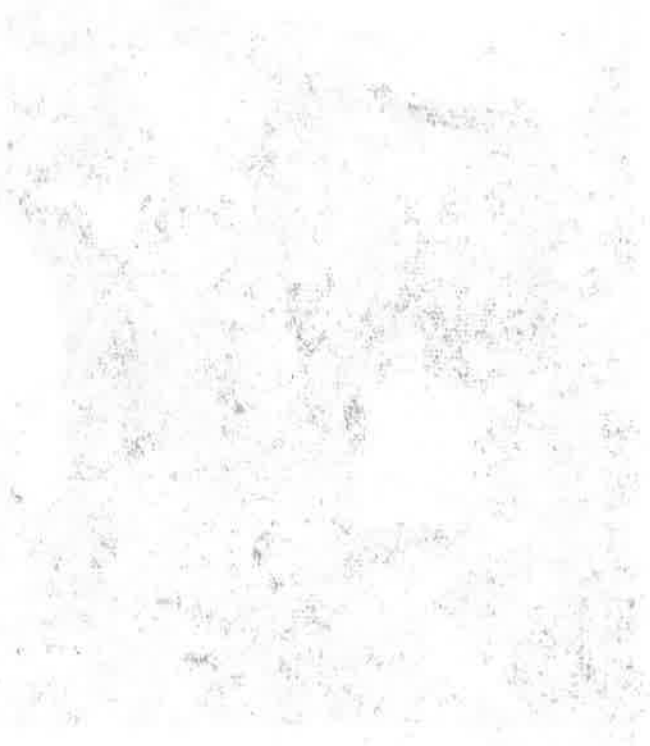
Paint protects buildings from the elements and adds color and character. A good coat of paint, well bonded to the substrate, preserves wood, iron, and similar materials. Soft brick was sometimes painted to improve its appearance and durability, and to provide space for advertising. Painted signs were a common sight on the sides of brick buildings in commercial areas during the late nineteenth and early twentieth centuries.

Historically, most wooden surfaces were painted to protect them from weathering. Stain and clear coats were used only sparingly, primarily for interior surfaces. Until the Arts and Crafts movement of the early twentieth century, the grain of soft woods such as pine was not considered to be aesthetically pleasing.

In the past, buildings were painted with a limited palette of colors because natural pigments were expensive. Public taste also dictated that buildings be painted in a manner that complemented the streetscape. Even during the Victorian period, when decoration became bold and complex, building exteriors were generally painted in a few muted tones.

GENERAL

- Hardware should not be painted.
- When appropriate, paint gutters, downspouts, metal frames for doors, storm windows and windows, roof-vent assemblies, and fire escapes to match the wall, trim, or roof color of a building as appropriate. Paint non-historic items with the least conspicuous color to reduce their visibility.
- Do not paint any building element if historical evidence shows that it was never painted.
- Prepare all building substrates properly and apply a compatible paint coating system following manufacturers' application instructions. Generally, a primer coat and two finish coats are recommended.



San Antonio, TX

Summary

Main Historic building: Solar panels shall be installed on rear slopes or other locations not easily visible from the public right-of-way.

Historic Accessory Building: Solar panels shall be installed on rear slopes or other locations not highly visible from the public right-of way

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www.solarsanantonio.org

SOLAR SAN ANTONIO

OFFICE OF HISTORIC PRESERVATION san antonio

City of San Antonio Office of Historic Preservation
Guidelines for Solar Panels for Locally Designated Historic Properties

When planning the installation of solar panels the overall objective is to preserve character-defining features and historic fabric while accommodating the need for solar access to the greatest extent possible. All solar panel installations must be considered on a case by case basis recognizing that the best option will depend on the characteristics of the property under consideration. Some guidelines apply to virtually all installation options and are repeated in each section.

All solar panel installations should conform to the Secretary of the Interior's Standards for Rehabilitation.

Applicable Standards are:

Standard Two: 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.
Standard Nine: 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.
For most properties, locating solar panels on the primary facade is not an option because it will adversely effect on the property's character defining features. All other options should be thoroughly explored. Options are listed on order of preference.

1: Freestanding or Detached On-Site

Freestanding or detached on-site solar panels should be installed in locations that minimize visibility from the public right of way. These systems should be screened from the public right of way with materials elsewhere in the district such as fencing or vegetation of suitable scale for the district and setting.

Placement and design should not detract from the historic character of the site or destroy historic landscape materials.

Consideration to the visibility of solar panels from neighboring properties should be taken, without infringing upon the required solar access.

2: New Construction On-Site

Solar panels should be integrated into the initial design of new construction or infill projects, when possible, to assure cohesion of design within a historic context.

Solar panels should be installed on rear slopes or other locations not highly visible from the public right of way whenever possible. Panels should be installed flat and not alter the slope of the roof.

Flat roof structures should have solar panels set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from the public right-of-way.

Use solar panels and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the solar panel system should be treated to be as unobtrusive as possible.

Use of solar systems in windows or on walls, siding, or shutters should be installed with limited visibility from the public right-of-way. *Freestanding solar panels should be installed in locations that minimize visibility from the public right of way.*

3: Historic Accessory Structures

Solar panels should be installed on rear slopes or other locations not highly visible from the public right-of-way. Panels should be installed flat and not alter the slope of the roof. Installation of panels must be reversible and not damage the historic integrity of the resource and district.

Flat roof structures should have solar panel installations set back from the roof edge to minimize visibility. Pitch and elevation should be adjusted to reduce visibility from public right-of-way.

Solar panel installations should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.

Use solar panels and mounting systems that are compatible in color to the property's roof materials. Mechanical equipment associated with the photovoltaic system should be as unobtrusive as possible.

4: Primary Historic Resource

Solar panels should be installed on rear slopes or other locations not easily visible from the public right-of-way.

Utilization of low-profile solar panels is recommended. Solar shingles laminates, glazing, or similar materials should not replace original or historic materials.

Use of solar systems in windows or on walls, siding, and shutters should be avoided.

Panels should be installed flat and not alter the slope of the roof. Installation of panels must be reversible and not damage to the historic integrity of the resource and district.

Solar panels should be positioned behind existing architectural features such as parapets, dormers, and chimneys to limit their visibility.

Use solar panels and mounting systems that are compatible in color to established roof materials. Mechanical equipment associated with the photovoltaic system should be treated to be as unobtrusive as possible.

Not Recommended for Any Reason

Removal of historic roofing materials during the installation of solar panels.

Removing or otherwise altering historic roof configuration – dormers, chimneys, or other features – to add solar panels.

Any other installation procedure that will cause irreversible changes to historic features or materials.

When considering retrofitting measures, historic building owners should keep in mind that there are no permanent solutions. One can only meet the standards being applied today with today's materials and techniques. In the future, it is likely that the standards and the technologies will change and a whole new retrofitting plan may be necessary. Thus, owners of historic buildings should limit retrofitting measures to those that achieve reasonable energy savings, at reasonable costs, with the least intrusion or impact on the character of the building.

National Park Service. *Preservation Brief 3: Conserving Energy in Historic Buildings.*
Available from: http://www.nps.gov/history/hps/TPS/briefs/brief03.htm#Preservation%20Retrofitting.

The information above is adapted from guidelines developed by Kimberly Kooles, Program Associate, Center for State and Local Policy, National Trust for Historic Preservation, as part of her work directing the National Alliance of Preservation Commissions Sustainable Preservation Initiative in 2007 – 2009

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(National Park Service. *Preservation Brief 3: Conserving Energy in Historic Buildings.* Available from http://www.nps.gov/history/hps/TPS/briefs/brief03.htm#Preservation% 20Retrofitting. Accessed on August 10, 2009.)

Denver, CO

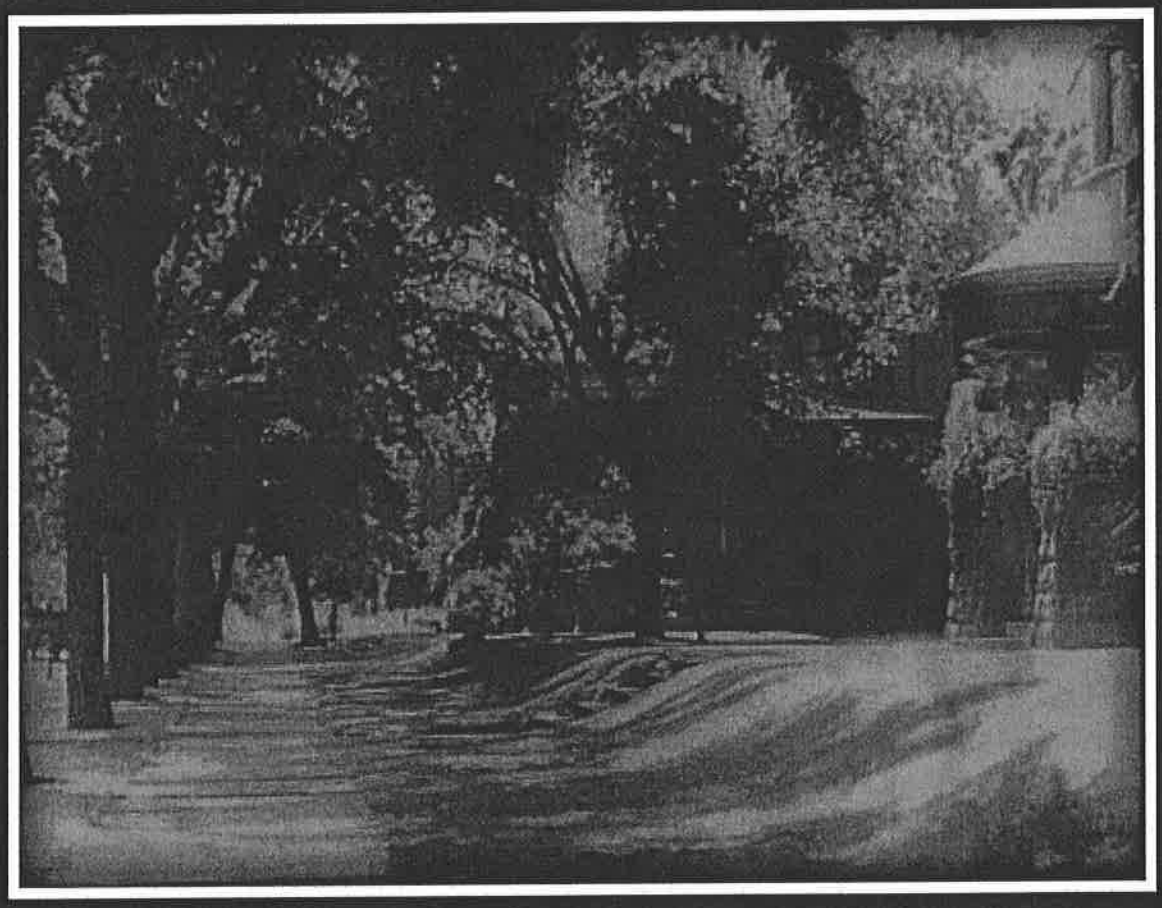
Summary

Avoid placing solar panels on the exterior of primary, character defining facades.

Solar panels should be visually screened or located out of public view.

DESIGN GUIDELINES

for LANDMARK STRUCTURES *and* DISTRICTS



DENVER LANDMARK PRESERVATION COMMISSION
& PLANNING AND DEVELOPMENT OFFICE

CITY *and* COUNTY *of* DENVER
MARCH 1995

Mechanical Equipment

Introducing a new heating, ventilating, air-conditioning and other systems into a historic building should be planned such that original materials are not damaged or obscured. These systems also should not alter the perceived character of a historic building or its site.

29. Minimize the visual impacts of new mechanical systems and service equipment.

a. Visually screen service equipment, including transformers, solar collectors and satellite dishes, or locate them out of public view. Use screen designs that are in character with the property.

b. Avoid placing mechanical, electrical, telecommunications equipment, and solar panels on the exterior of primary, character defining facades.

c. Avoid damaging original materials when installing new mechanical, electrical, and safety systems.

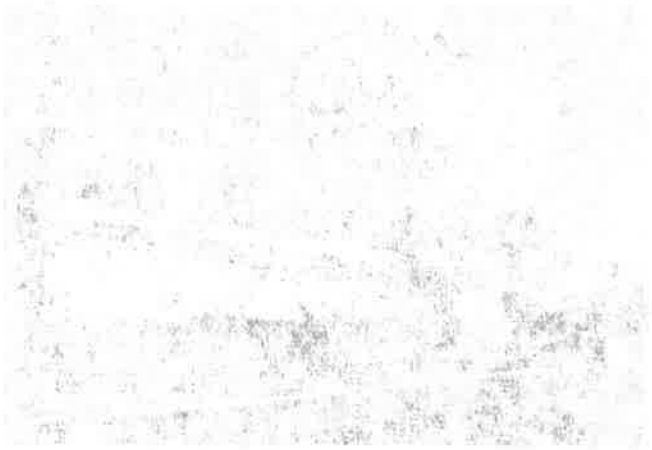
29. Satellite dishes, such as those shown here, should be screened or placed away from the street.

Existing Alterations on Historic Buildings

Many alterations and additions to buildings that have taken place in the course of time are themselves evidence of the history of the building and its neighborhood and therefore may merit preservation along with the original structure. More recent alterations and additions may be removed. As a rule of thumb, those alterations that are more than 30 years old may have gained significance. Alterations need not be removed if they are in good condition and do not obscure original materials and features; however, removing such alterations from individual Landmarks is encouraged.

30. Preserve alterations that have achieved historic significance in their own right. These alterations should be treated in the same manner as origional materials and features.

30. The Colorado Building was constructed in 1891. The terra cotta facing was added in 1935 and is now a significant feature that should be preserved.



Alexandria, VA

Summary

Roof mounted solar collectors should be located on the most visually inconspicuous area of a structure consistent with the requirements of maximum access to the sun.

The trimwork on solar collectors should be painted to match the predominant color of the roof material to limit visibility.

SOLAR COLLECTORS

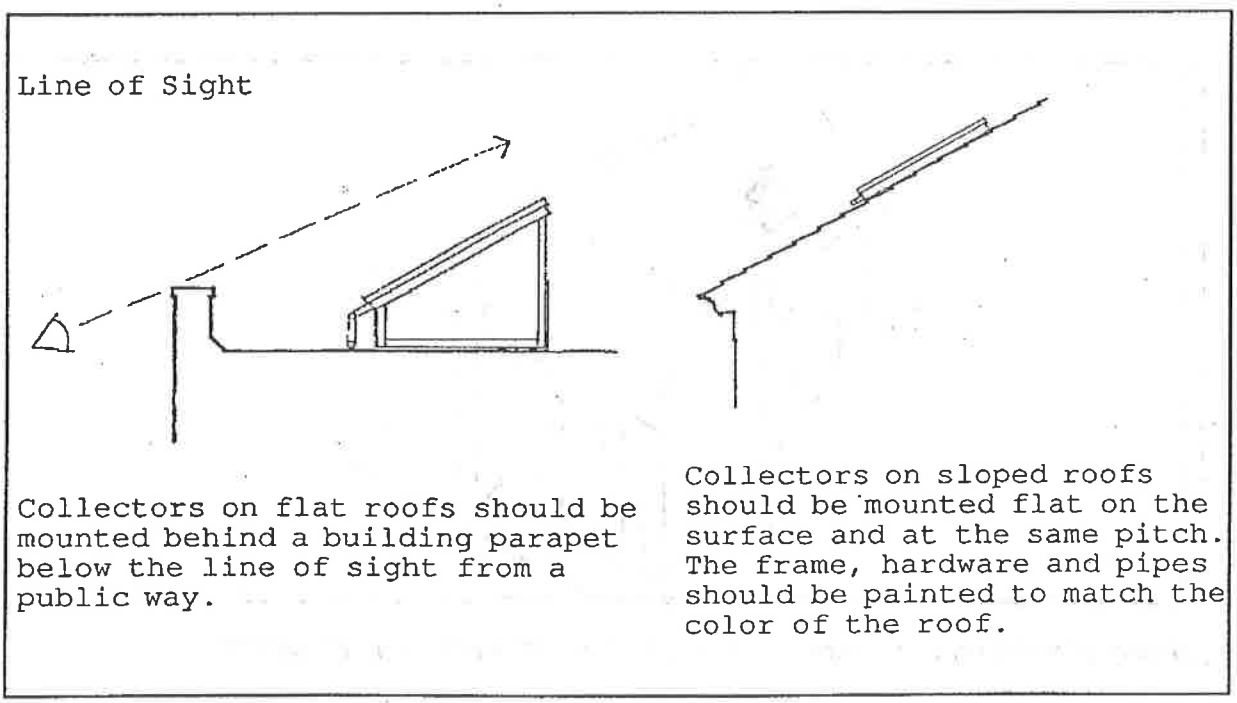
INTRODUCTION

Solar collectors or panels either on residential or commercial buildings that are visible from a public way require the approval of a certificate of appropriateness by the Boards of Architectural Review and must also comply with the Zoning Ordinance requirements for heights of structures.

Since the mid-1970s, the use of solar collectors as a source of energy for hot water and electricity has increased throughout the country. Generally, solar collectors are mounted on the roof of a structure. On historic structures where a roof mounted solar collector would create a visual intrusion, solar collectors can be mounted on the roofs of accessory buildings such as a shed or outbuilding. While there are a number of properties with rooftop solar collectors in the historic districts, the installation of solar collectors is generally discouraged as not compatible with the architectural character of the historic districts. In certain instances, however, solar collectors can be mounted on the ground so that they are not visible from a public way.

REQUIREMENTS

- Solar collectors must meet the requirements of the Uniform Statewide Building Code (USBC).
- A building permit is required for the construction of solar collectors.
- Existing buildings must have the structural capacity to support rooftop solar collector equipment. If additional structural capacity is needed, it must be designed by a professional engineer.
- On residential properties, solar collectors must meet all the front, rear and sideyard setback requirements of the Zoning Ordinance.
- Roof mounted solar collectors cannot exceed the established building height limitation in the historic districts.



Collectors on flat roofs should be mounted behind a building parapet below the line of sight from a public way.

Collectors on sloped roofs should be mounted flat on the surface and at the same pitch. The frame, hardware and pipes should be painted to match the color of the roof.

GUIDELINES

- Roof mounted solar collectors should be located on the most visually inconspicuous area of a structure consistent with the requirements of maximum access to the sun.

- Photovoltaic solar collectors should be as small as possible consistent with operational requirements.

- Solar collectors should be mounted at an angle which is as close to the adjacent roof slope as possible. Collectors mounted at steep angles can create extreme visual distraction to the facade and roofline of a building.

- The trimwork on solar collectors should be painted to match the predominant color of the roof material to limit visibility.

- Ground mounted solar collectors should be screened as much as possible by an earth berm or with low shrubs or other planting materials.

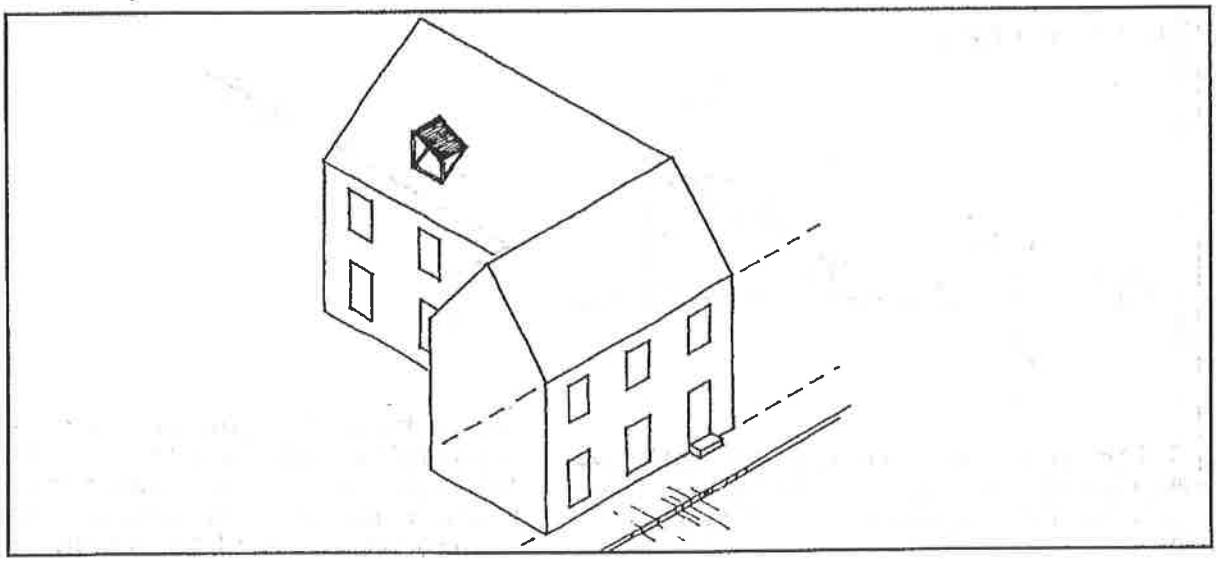
APPLICATION REQUIREMENTS

In order to properly evaluate the appropriateness of a proposed solar collector, the Boards of Architectural Review require that an accurate depiction of the design be presented. Sketches that are not to scale are not acceptable. Most designs for solar collectors presented to the Boards of Architectural Review are prepared by a professional designer; however, such a professionally prepared submission is not mandatory.

All applications for approval of solar collectors must contain the following information:

Alexandria Business License
Proof of a valid Alexandria Business License is required at the time of application for contractors, subcontractors, architects, and designers.

Photograph of Existing Building
A clear photograph of the existing building is required for reference.



Solar collectors may be mounted on the rear ell of buildings which face south.

Roof Plan
For roof mounted solar collectors, a roof plan accurately showing the location of the solar collector is required.

Size
The drawing must accurately indicate all dimensions of the solar collector. In addition, a cut sheet or manufacturer's specifications sheet accurately depicting the solar collector must be included in the application.

Color
The color of the collector must be indicated and an actual color sample provided.

RELATED SECTION

Roofs

REFERENCE:

Thomas Vonier Associates, Inc., *Energy Conservation and Solar Energy for Historic Buildings,* National Park Service, 1981.

NOTE: Illustrations are provided for information only. Applications for certificates of appropriateness are reviewed and approved on a case-by-case basis.

ADOPTED BY THE BOARDS OF
ARCHITECTURAL REVIEW, 5/25/93

EXTERIOR STAIRCASES

INTRODUCTION

Exterior staircases that are visible from a public way require the approval of a certificate of appropriateness by the Boards of Architectural Review.

Exterior staircases are usually a second means of egress from the upper floors of structures. In commercial buildings, exterior stairways are often required as a safety exit. On residential properties, exterior staircases may be required by the building code for access to an upper story apartment. In addition, exterior staircases are often used to provide access to an upper level outdoor deck.

REQUIREMENTS

- Exterior staircases must meet the requirements of the Virginia Uniform Statewide Building Code (USBC).

- A building permit is required for the construction of exterior staircases.

- Exterior staircases must have handrails and guardrails.

- On commercial properties, the USBC requires that an exterior exit stairway be protected from ice and snow.

- Open staircases are permitted in any yard except a front yard (See § 7-202(B)(7) of the Zoning Ordinance).

- On residential properties, exterior stairways that are enclosed or that have roofs must meet the rear and side yard setback requirements of the Zoning Ordinance.

GUIDELINES

- Exterior stairways should not be located on a principal facade elevation. Such stairways should generally be located on the rear elevation of a property.

- The material of an exterior stairway should respect the age and character of the building it services.

- Exterior stairways should be made of material appropriate to the period of the structure. For example, wood stairways are preferred for 18th and early 19th century buildings and should have detailing that reflects the architectural characteristics of the structure. Iron or metal stairways are appropriate for late 19th century buildings.

- Circular metal stairways are only appropriate for late-20th century buildings and should be inconspicuously located.

- Exterior stairways may be protected from ice and snow either by covering with an awning or with heat tape.

- Exterior wood stairways must be painted or stained.

APPLICATION REQUIREMENTS

In order to properly evaluate the appropriateness of the design of a proposed exterior stairway, the Boards of Architectural Review require that an accurate depiction of the design be presented. Sketches that are not to scale are not acceptable. Most designs for exterior stairways presented to the Boards of Architectural Review are prepared by a professional designer; however, such a professionally prepared submission is not mandatory.

All applications for approval of exterior staircases must contain the following information:

Proposed Revisions to Solar Panel Guidelines

August 21, 2013

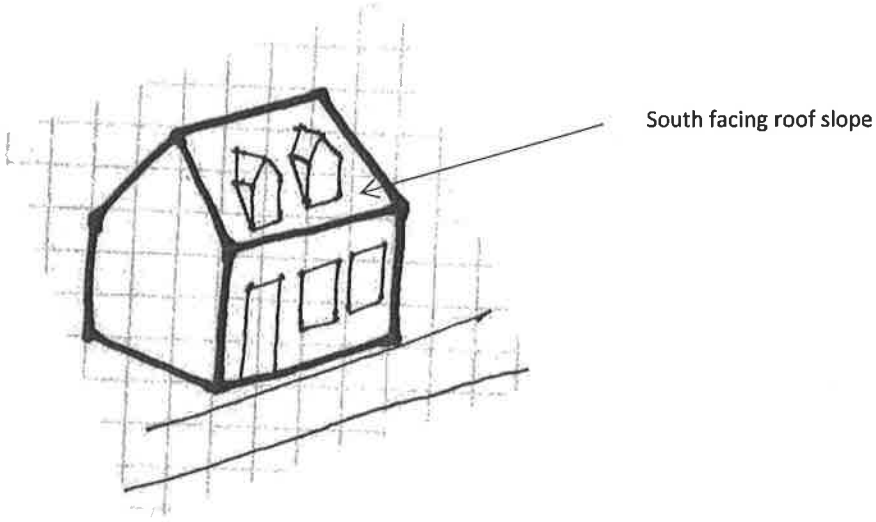
Category 1 Visibility

- Primary façade

  Recommended installation:

  a. Standing seam roof with solar film

  b. Free standing/detached solar panels on site

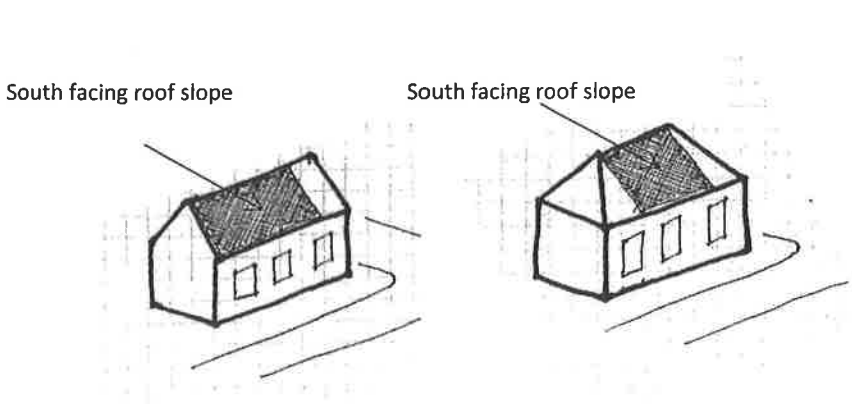


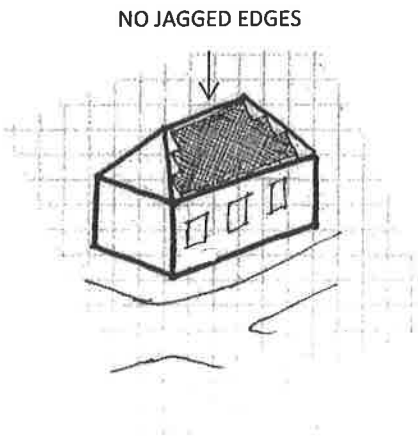
Category 2 Visibility

- Secondary (side)elevation facing street

  Recommended installation:

  a. Black on black panels, full, rectangular roof coverage





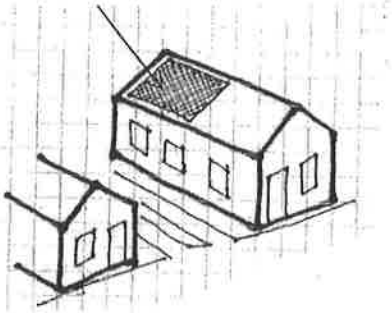
Category 3 Visibility

- Highly Visible side or rear elevations due to parks, driveways, vacant lots.

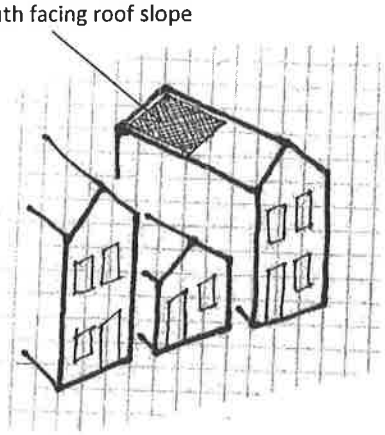
  Recommended installation:

  a. Black on black panels, full, rectangular, roof coverage

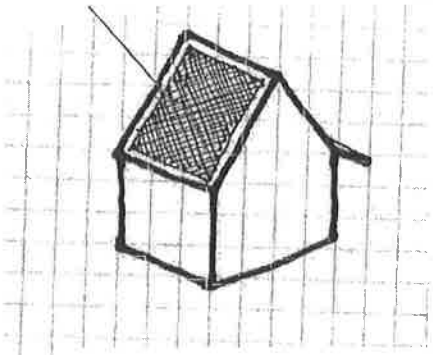
South facing roof slope



South facing roof slope



South facing roof slope



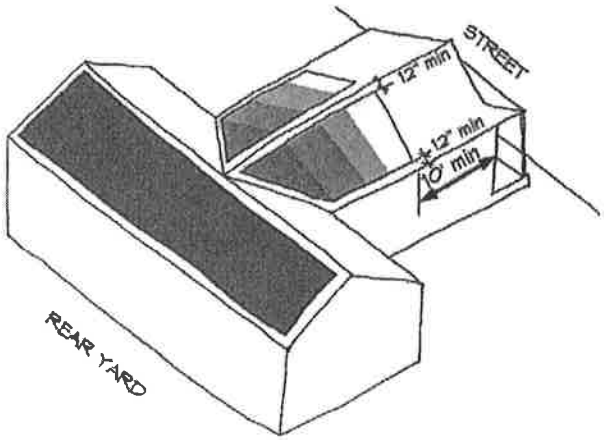
Rear roof slope

Category 4 Visibility

- Mid-block conditions with partial visibility

  Recommended installation:

  a. Any panel type or shape set back 10'-0" from front wall of building.



Category 5 Visibility

- Highly visible accessory buildings

  Recommended installation:

  a. Black on black panels with rectangular, full, coverage.

South facing roof slope