



# Staff Report

PLANNING DIVISION  
COMMUNITY & ECONOMIC DEVELOPMENT

To: Salt Lake City Historic Landmark Commission  
From: Nora Shepard, Senior Planner  
[nora.shepard@slcgov.com](mailto:nora.shepard@slcgov.com) 801-535-7226  
Date: March 2, 2017  
Re: **PLNHLC2017-00007** – Solar Panels 663 E 2<sup>nd</sup> Ave

---

## MINOR ALTERATIONS

**PROPERTY ADDRESS:** 663 E 2<sup>nd</sup> Ave  
**PARCEL ID:** 09-32-353-018-0000  
**HISTORIC DISTRICT:** Avenues Local Historic District  
**ZONING DISTRICT:** SR-1A (Special Development Pattern Residential)  
**MASTER PLAN:** Low Density

**REQUEST:** Shanna Velasquez of Creative Energies, is requesting approval from the City to locate solar panels on the front-facing roof plane of a single-family residence located in the Avenues Historic District. This type of project must be reviewed as Minor Alteration by the Historic Landmark Commission.

**RECOMMENDATION:** As outlined in the analysis and findings in this staff report, Planning Staff recommends the Historic Landmark Commission approve the location of the solar panels as proposed.

**MOTION (consistent with Staff Recommendation):**

### ATTACHMENTS:

- A. [Vicinity Map](#)
- B. [Historic District Map](#)
- C. [Site Plans and Property Photos](#)
- D. [Analysis of Standards](#)
- E. [Applicable Design Guidelines](#)
- F. [Public Process and Comments](#)
- G. [Motions](#)

### BACKGROUND AND PROJECT DESCRIPTION:

The subject parcel is a single family home located at approximately 663 E 2<sup>nd</sup> Ave and is considered a contributing historic property in the Avenues Historic District. In the most recent reconnaissance level survey, the house is classified as a one-story L-shaped Greek Revival style cottage built in the early 1880's.

The property owner, Matt Dimick, is a participant in the University of Utah and Utah Clean Energy's U-Community Solar Program. The system that Creative Energies has designed will utilize 15 LG 300 Watt modules that are estimated to offset 90% of the annual energy usage of the home. Six of the modules will be placed on the front facing roof plane and will be visible from the street. The remaining 9 panels are located on a flat portion of roof behind the street façade and will not be visible. The front facing panels require review and approval by the Historic Landmark Commission (HLC). This home is set back and elevated from the street. There is a shed roof over the front porch of the house. There will be no panels on the shed roof.

To comply with fire code, the solar panels are located 3 feet from the roof ridge and sides of the roof. They will be mounted using the SnapNRack solar mounting system. The 6 modules on the front facing roof plane will be flush mounted (not more than 4 inches from the roof surface and parallel with the roof pitch). The visibility of this array will be reduced by closely matching the color of the dark shade of the shingles. The panels have a matte glass cover with an antiglare coating. The frames are black.



The applicant was asked to provide information on why the panels on the front roof plane are necessary. They offer this explanation:

*Why aren't the solar panels on the flat portion of the roof enough? Do you really need the panels on the front façade as well?*  
We've maximized the amount of panels that can be installed on the flat portion of roof. The portion of the project installed on the flat roof will only offset 45% of the homeowner's annual needs and is insufficient to justify the solar project. The front façade features a nearly perfect solar resource for the project and is, by far, the best site for the installation. By including panels here, the project will offset 90% of the homeowner's annual needs and makes the project financially viable.

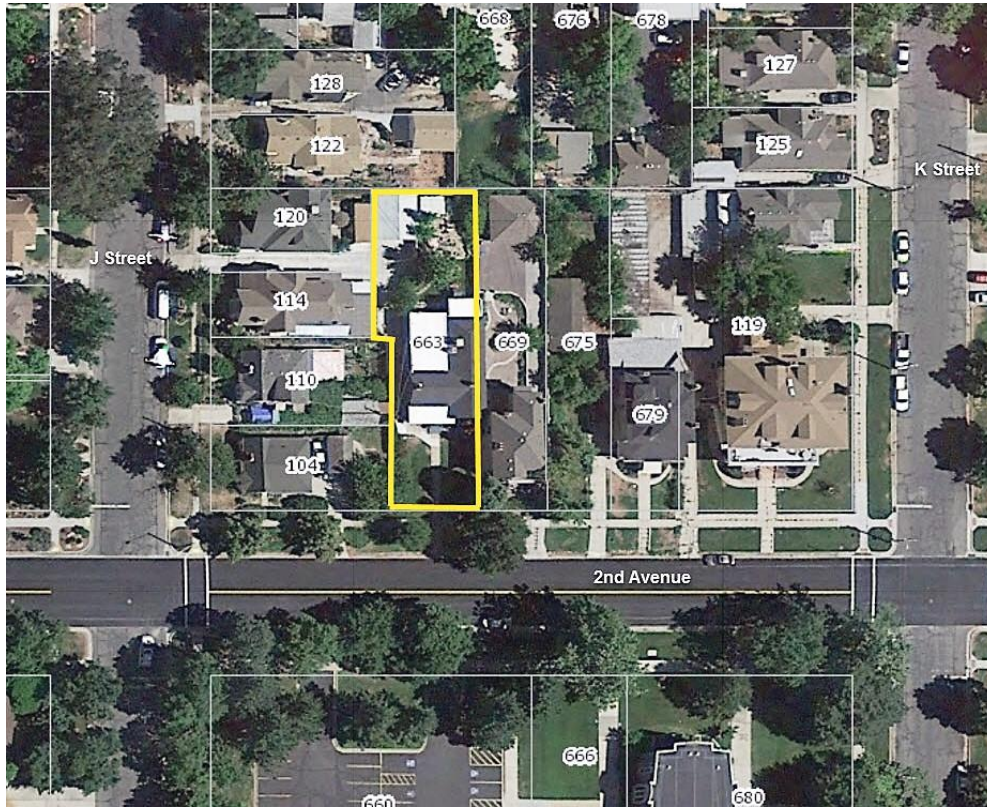
*Can they be placed on the accessory structure in the backyard? If not, why not?*  
No. The accessory structure in the backyard is severely shaded by trees to the immediate east, a utility pole to the southeast, and a large pine tree to the west. Furthermore, the underlying support members of the garage and are not

capable of supporting the additional weight of solar and will not pass an engineering report. There is visible sagging to the "stick built" 2x4 rafters and the corrugated sheet metal roofing cannot be properly flashed and sealed. Even if the structure was reinforced and re-roofed, significant expense would be incurred to trench and perform concrete work to electrically interconnect the system to the main service panel on the home.

· *Could they be placed on the west facing roof plane?*

No. The west facing roof plane is shaded from the chimney which would significantly diminish energy output. Additionally, the east and west roofs are pitched in excess of the maximum 35 degrees allowed by the State of Utah's Office of Energy Development. Installing on the east and/or west roofs would result in diminished energy output and fails to qualify for the Utah State Tax Credit which is worth \$2,000 to the homeowner. Without the tax credit, the project is rendered financially unviable.

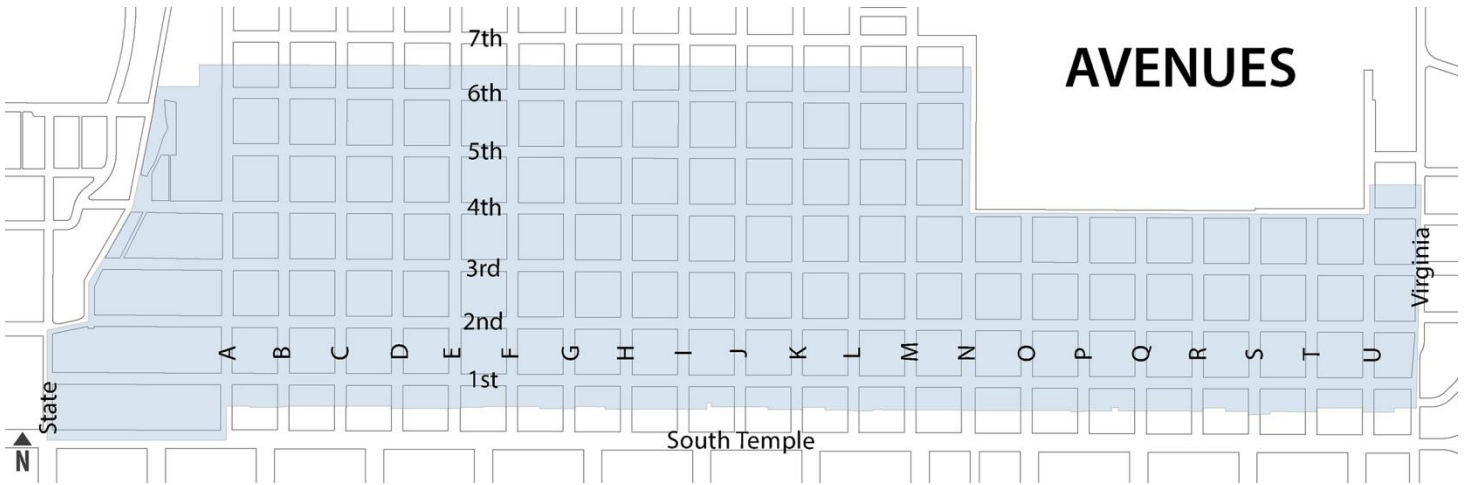
## **ATTACHMENT A: SITE PLAN**





## ATTACHMENT B: HISTORIC DISTRICT MAP

---



★ *Approximate project location*



## **ATTACHMENT C: ROPERTY PHOTOS**

---





# ATTACHMENT D: ZONING ORDINANCE STANDARDS

## 21A.40.190 Small Solar Energy Collection Systems

- A. Standards: All small solar energy collection systems shall comply with the following requirements except as provided in section 21A.40.190.B relating to small solar energy collection systems in the historic preservation overlay districts. Per section 21A.34.020 of this title the historic landmark commission or staff has authority to modify the setbacks, location and height to ensure compliance with the overlay district regulations. Excluding subsection B of this section, if there is any conflict between the provisions of this subsection and any other requirements of the zoning, site development, and subdivision ordinances, the zoning administrator shall determine which requirements apply to the project in order to achieve the highest level of neighborhood compatibility.

Standard	Finding	Rationale
<p><b>Standard 1:</b> Setbacks, Location and Height:</p> <ul style="list-style-type: none"> <li>a. A freestanding small solar energy collection system shall be located a minimum of six feet (6') from all property lines and other structures, except the structure on which it is mounted.</li> <li>b. A small solar energy collection system may be located on a principal or accessory structure, including legal principal or accessory structures located less than the required minimum setback for the zoning districts.</li> <li>c. A small solar energy collection system shall not exceed by more than three feet (3') the maximum building height (based on the type of building - principal or accessory - the system is located on) permitted in the zoning district in which it is located or shall not extend more than twelve feet (12') above the roofline of the structure upon which it is mounted, whichever is less.</li> <li>d. A development proposed to have a small solar energy collection system located on the roof or attached to a structure, or an application to establish a system on an existing structure, shall provide a structural certification as part of the building permit application.</li> </ul>	<p><b>Complies</b></p>	<ul style="list-style-type: none"> <li>a. The proposed small solar energy collection system is proposed to be located on the roof of the existing residence. The location of the system will not overhang the roof and will not encroach into any front, side or rear lot area. As long as the system is mounted on the main structure, it is allowed to be less than six feet from the property if it is determined by the Historic Landmark Commission to meet all other standards of the ordinance.</li> <li>b. The proposed small solar energy collection is located on the primary structure. There is an accessory structure on the property but it is not structurally sound to hold solar panels and it is shaded.</li> <li>c. The proposed small solar energy collection system is proposed to be mounted as flush with the roof as possible, parallel to the roof plane, below the ridge of the roofline. The solar panels themselves will project approximately four inches above the roof, but not above the roof ridge. In addition, the existing one-story residence</li> <li>d. If the solar panels are approved, the applicant will need to submit all necessary documentation for the installation and structural details for the proposed small solar energy collection system when a building permit is applied for.</li> </ul>
<p><b>Standard 2:</b> Coverage: A small solar energy collection system mounted to the roof of a building shall not exceed ninety percent (90%) of the total roof area of the building upon which it is installed. A system constructed as a separate accessory structure on the ground shall count toward the total building and yard coverage limits for the lot on which it is located.</p>	<p><b>Complies</b></p>	<p>The proposed small solar energy collection system is proposed to be mounted on the main residence and not on an accessory building. The solar system has 4 arrays. Each array consists 6 modules (panels). Three of the arrays (18 modules) are being placed on the back, flat portion of the roof. One array (6 modules) is on the front facing roof plane.</p>



<b>Standard 3:</b> Code Compliance: Small solar energy collection systems shall comply with all applicable building and electrical codes contained in the international building code adopted by Salt Lake City.	<b>Complies</b>	Should the proposed small solar energy collection system be approved, it will need to comply with all applicable codes adopted by Salt Lake City. This standard will need to be met should the proposal be approved and a building permit is applied for.
<b>Standard 4:</b> Solar Easements: A property owner who has installed or intends to install a small solar energy collection system shall be responsible for negotiating with other property owners in the vicinity for any desired solar easement to protect solar access for the system and shall record the easement with the Salt Lake County recorder.	<b>Complies</b>	The applicant will be responsible for negotiating with other property owners for any desired solar easements. This standard is not applicable to the approval of this project.
<b>Standard 5:</b> Off Street Parking and Loading Requirements: Small solar energy collection systems shall not remove or encroach upon required parking or loading areas for other uses on the site or access to such parking or loading areas.	<b>Complies</b>	The proposed small solar energy collection system is located on the main residence and is not located upon any required parking area.

## 21A.40.190 Small Solar Energy Collection Systems

### B. Small Solar Energy Collection Systems and Historic Preservation Overlay Districts or Landmark Sites

Regulation	Finding	Rationale
<p><b>3. Small Solar Energy Collection System Location Priorities:</b> In approving appropriate locations and manner of installation, consideration shall include the following locations in the priority order they are set forth below. The method of installation approved shall be the least visible from a public right of way, not including alleys, and most compatible with the character defining features of the historic building, structure, or site. Systems proposed for locations in subsections B3a through B3e of this section, may be reviewed administratively as set forth in subsection <a href="#">21A.34.020F1</a>, "Administrative Decision", of this title. Systems proposed for locations in subsection B3f of this section, shall be reviewed by the historic landmark commission in accordance with the procedures set forth in subsection <a href="#">21A.34.020F2</a>, "Historic Landmark Commission", of this title.</p> <ol style="list-style-type: none"> <li>Rear yard in a location not readily visible from a public right of way.</li> <li>On accessory buildings or structures in a location not readily visible from a public right of way.</li> <li>In a side yard in a location not readily visible from a public right of way.</li> <li>On the principal building in a location not readily visible from a public right of way.</li> <li>On the principal building in a location that may be visible from a public right of way, but not on the structure's front facade.</li> <li>On the front facade of the principal building in a location most compatible with the character defining features of the structure.</li> </ol>	<p><b>Complies</b></p>	<ol style="list-style-type: none"> <li>The rear yard is not an option for installation as the yard area contains vegetation that could prevent adequate exposure for the proposed solar panels.</li> <li>The accessory building on the parcel is not structurally sound enough for the solar panels to be mounted on it. An accessory structure mounting is not an option.</li> <li>The existing residence has a narrow side yard setbacks property that would not accommodate the small solar energy collection system.</li> <li>There are other panels proposed on other portion of the roof that are not visible from the street. Additional panels are needed for the project to be eligible for tax credits and to offset the energy needs by 90%. Based on the shape and size of the roof, there is no other location where the panels could be located to meet the sun exposure requirements and not be visible from the public right-of-way.</li> <li>There are a total of 15 solar panels proposed. 6 on the south, front facing side of the roof, and 9 on the back portion of a flat roof that will not be visible from the street. There is not adequate roof space to accommodate more solar panels than what is already proposed for those areas.</li> </ol> <p><b>Finding:</b> This application cannot be administratively approved as the preferred location priorities are not suitable based on the orientation, size and site features of this property as described above. This request shall be reviewed by the Historic Landmark Commission.</p> <ol style="list-style-type: none"> <li>The location of the proposed small solar collection system on the front facing roof plane is compatible with the character defining features of the building. While the proposed small solar collection system is proposed to be located on this front facing roof slope, it will not be detrimental to the residence or its features. The proposed small solar collections system will be located as flush to the roof as possible and it not a feature that will permanently alter the historic structure. The proposed small solar collection system could easily be removed in the future with little to no damage to the historic structure.</li> </ol>

# HISTORIC PRESERVATION STANDARDS

## H Historic Preservation Overlay District – Standards for Certificate of Appropriateness for Altering of a Landmark Site or Contributing Structure (21A.34.020.G)

In considering an application for a Certificate of Appropriateness for alteration of a landmark site or contributing structure, the Historic Landmark Commission shall find that the project substantially complies with all of the general standards that pertain to the application and that the decision is in the best interest of the City.

Standard	Finding	Rationale
<b>Standard 1:</b> A property shall be used for its historic purpose or be used for a purpose that requires minimal change to the defining characteristics of the building and its site and environment;	<b>Complies</b>	The building was constructed in the late 1880's as a single family home. No change of use is proposed and very little, if any, impact will be made to the characteristics of the property. In the event the proposed small solar collection system damages the roof, it would most likely only damage the roofing material which is not original. The house has a number of additions and modifications that are not considered historic.
<b>Standard 2:</b> 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;	<b>Complies</b>	No historic materials or features are proposed to be altered as part of this request. The proposed small solar collection system will be mounted on the roof and can easily be removed in the future with little to no impact on the structural integrity of the property. They will be placed parallel to the roof or approximately 3 inches off the roof surface. They are designed to be as flush with the roof as possible. Even though all the panels will be visible from the street on, the options for where to place the panels are limited as previously discussed in order to efficiently produce energy.
<b>Standard 3:</b> All sites, structure and objects shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create a false sense of history or architecture are not allowed.	<b>Complies</b>	The small solar energy collection system is a utility feature and is not being installed in a manner to create a false sense of history or architecture. This standard is met.
<b>Standard 4:</b> Alterations or additions that have acquired historic significance in their own right shall be retained and preserved.	<b>Complies</b>	No significant historic features will be lost. The proposal complies with this standard.
<b>Standard 5:</b> Distinctive features, finishes and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.	<b>Complies</b>	No significant historic features will be lost as the proposed small solar collection system will be located on the roof and will have very little impact to the roof or the character of the property. The property and the structure will continue to remain a historic property that can have the solar panels removed with little to no impact to the structure. The proposed small solar collection system will be flush mounted to the roof and will be required to be structurally safe per the building code requirements. This standard is met.

<b>Standard 6:</b> Deteriorated architectural features shall be repaired rather than replaced wherever feasible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other structures or objects.	<b>Not Applicable</b>	The subject proposal does not include repair or replacement of deteriorated architectural features. This standard does not relate to the proposal.
<b>Standard 7:</b> Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.	<b>Not applicable</b>	The proposed work does not include any treatments of historic materials. This standard is not applicable to the request.
<b>Standard 8:</b> Contemporary designs for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archaeological material, and such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment.	<b>Complies</b>	Although a minor feature will be added to the roof of the single family structure, the roof form itself will not be modified or altered. The proposed small solar energy collection system is designed to be flush mounted to have the least amount of visual and structural impact. In addition, the color of the roof is dark gray and the panels of the proposed small solar collection system are black. This standard is met.
<b>Standard 9:</b> Additions or alterations to structures and objects shall be done in such a manner that if such additions or alteration were to be removed in the future, the essential form and integrity of the structure would be unimpaired. The new work shall be differentiate from the old and shall be compatible in massing, size, scale and architectural features to protect the historic integrity of the property and its environment.	<b>Complies</b>	The proposed small solar energy collection system can be easily removed without impairing any form and integrity of the structure other than minimal damage to the asphalt shingle roof. This standard is met.
<b>Standard 10:</b> Certain building materials are prohibited including the following: vinyl, asbestos, or aluminum cladding when applied directly to an original or historic material.	<b>Not applicable</b>	Small solar energy collection systems are considered an accessory to the building and no original material will be affected.
<b>Standard 11:</b> Any new sign and any change in the appearance of any existing sign located on a landmark site or within the H historic preservation overlay district, which is visible from any public way or open space shall be consistent with the historic character of the landmark site or H historic preservation overlay district and shall comply with the standards outlined in part IV, Chapter 21A.46 of this title.	<b>Not applicable</b>	No signs are proposed. This standard is not applicable.



# ATTACHMENT E: APPLICABLE DESIGN GUIDELINES

---

The following are applicable historic design guidelines related to this request. On the left are the applicable design guidelines and on the right, a list of the corresponding Zoning Ordinance standards for which the design guidelines are applicable. The following applicable design guidelines can be found in *Design Guidelines for Commercial Properties and Districts in Salt Lake City*.

Applicable Design Guidelines	Corresponding Standards for a Certificate of Appropriateness
<p><b>Design Objective 7.6- The visual impact of skylights and other rooftop devices should be minimized.</b></p> <ul style="list-style-type: none"><li>• <b>Skylights or solar panels should be installed to reflect the plane of the historic roof.</b></li><li>• <b>They should be lower than the ridgeline, when possible.</b></li><li>• <b>Flat skylights and solar panels that are parallel with the roof plane may be appropriate on the rear and sides of the roof.</b></li><li>• <b>Avoid locating a skylight or solar panel on a front roof plane wherever possible.</b></li></ul>	Standards 2, 5, 8 and 9

## **ATTACHMENT F: PUBLIC PROCESS AND COMMENTS**

---

### **Public Notice, Meetings and Comments**

The following is a list of public meetings that have been held, and other public input opportunities, related to the proposed project.

#### **Notices of the public hearing for the proposal include:**

- Notice mailed on February 15, 2017
- Agenda posted on the Planning Division and Utah Public Meeting Notice websites on February 15, 2017
- Property posted on February 15, 2017

Staff has not received any public comment related to this project. Any comments received after the publication of this staff report will be forwarded to the Historic Landmark Commission.

## **ATTACHMENT G: MOTIONS**

---

### **Consistent with Staff Recommendation:**

**Based on the analysis and findings listed in this staff report, testimony and the proposal presented, I move that the Commission approve the request for a minor alteration for the installation of a small solar energy collection system as proposed on the front facing roof plane, visible from the public right-of-way for the residence at 663 E 2<sup>nd</sup> Ave. Specifically, the Commission finds that the proposed project complies with the standards of review.**

### **Not Consistent with Staff Recommendation:**

**Based on the information, testimony and the proposal presented, I move that the Commission deny the request for a minor alteration for the installation of a small solar energy collection system as proposed on the front facing roof plane, visible from the public right-of-way for the residence at 663 E 2<sup>nd</sup> Ave. Specifically, the Commission finds that the proposed project does not comply with the standards of review. (Commissioner then states findings based on Standards 1, 2, 3, 4, 5, 8 and 9 to support the motion):**

- 1. A property shall be used for its historic purpose or be used for a purpose that requires minimal change to the defining characteristics of the building and its site and environment;**
- 2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided;**
- 3. All sites, structures and objects shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create a false sense of history or architecture are not allowed;**
- 4. Alterations or additions that have acquired historic significance in their own right shall be retained and preserved;**
- 5. Distinctive features finishes and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved;**
6. Deteriorated architectural features shall be repaired rather than replaced wherever feasible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other structures or objects;
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible;
- 8. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant cultural, historical, architectural or archaeological material, and such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment;**
- 9. Additions or alterations to structures and objects shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired. The new work shall be differentiated from the old and shall be compatible in massing, size, scale and architectural features to protect the historic integrity of the property and its environment;**
10. Certain building materials are prohibited including the following:
  - a. Aluminum, asbestos, or vinyl cladding when applied directly to an original or historic material.
11. Any new sign and any change in the appearance of any existing sign located on a landmark site or within the H historic preservation overlay district, which is visible from any public way or open space shall be consistent with the historic character of the landmark site or H historic preservation overlay district and shall comply with the standards outlined in chapter 21A.46 of this title.