HVAC

GUIDELINES – HVAC Equipment & Components:

Mechanical systems, including but not limited to air conditioning and heat pumps, where visible from the Public Way, are not appropriate to historic buildings. Proposals for systems should endeavor to locate all large equipment (condensers in particular) with no visibility from the Public Way and to minimize visibility of any smaller accessory equipment. Town of Marblehead bylaw §200-28 requires all freestanding exterior mechanical equipment, including but not limited to air conditioning units, compressors, condensers, and fans, to be visually screened, regardless of visibility from the Public Way, either by a method such as low fencing or evergreen vegetation. Dependent on site orientation and visibility from the Public Way, a built structure such as low fencing may be required to meet historic appropriateness. Freestanding equipment should not be located on primary facades or areas prominently visible from the Public Way. Equipment line sets (pipes, conduits, cables, and covers) can and should be routed inside the building just like traditional plumbing, either within a chase or embedded between wall studs. Alternatives to interior routing that obscure or disguise exterior line sets will be considered at the discretion of the Commission; however, horizontal sections of line sets are not permitted on the exterior where they would be visible from the Public Way.

PROCESS – HVAC Equipment & Components:

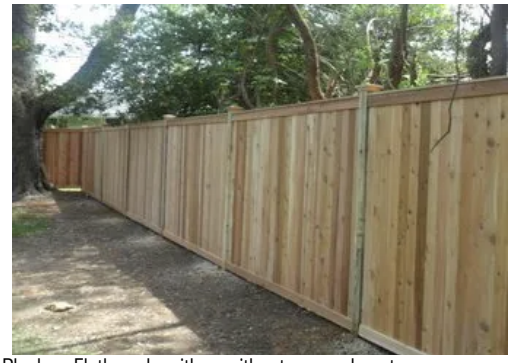
1. Complete and submit application for a COA
2. The application must include photos that best demonstrate proposed installation location(s) and any public views; photos must clearly show the proposed location(s). If the location is for new construction, only images of any public views are required.
3. Architects, designers, and drafters shall, whenever possible, include equipment locations in elevation and plan drawings for new construction and major renovations – OHDC will request these at the hearing otherwise, adding to an initial submission will help prevent delay.
4. OHDC Review/Determination:
    a. Locations proposed where there is no visibility are usually addressed quickly to confirm that all components are not visible from any public way.
    b. Locations proposed where there is minimal visibility, if approved by OHDC, are typically accompanied by a standard set of conditions (e.g., use of a particular type of fencing to obscure the condenser or other equipment/components, designation of a particular shielding for other components, etc.)

FENCING

GUIDELINES – Fencing:

1. Fencing should match the style and setting of the property.
2. Applicants with scopes of work affecting fences (and walls) along property lines should demonstrate ownership with a property survey dated within the last 5 years by a Massachusetts registered surveyor.
3. Fencing should be composed of natural materials except where iron fencing exists
4. Fence heights cannot exceed 6' from the ground (per town bylaws), and on the street fences should be no taller than 42" from the ground. Town bylaws also require fencing to graduate the fence height as a 6' fence approaches the street from between properties.

Below are examples of fence styles which have, in the past, been approved for use in the historic districts:


Plank or Flatboard - with or without cap and post crowns


Picket


Capped Picket


Baluster

Below are examples of styles that are generally NOT historically appropriate:


Shadow Box


Diamond Lattice


Lattice-capped


Rail or Post & Rail


Louver (horizontal boards)

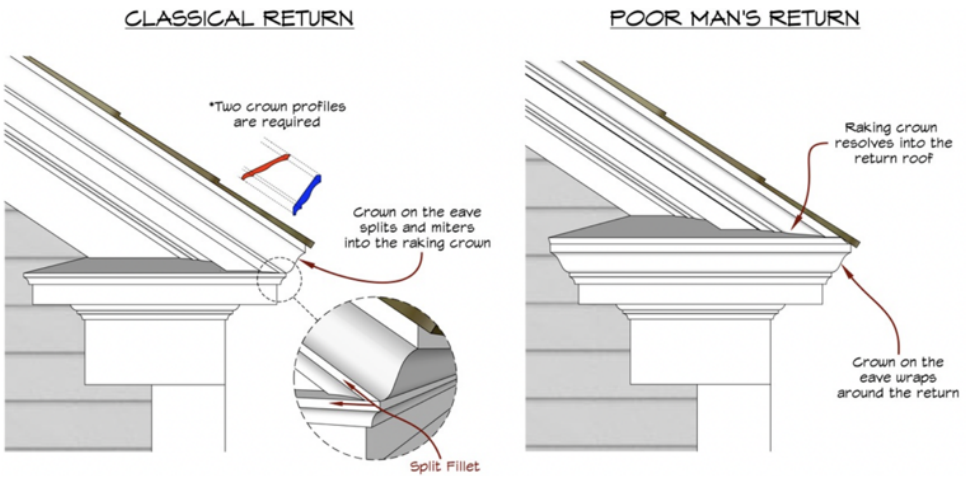

Board on Board (shadow or box, but touching)

Split Rail

ROOFING

GUIDELINES – ROOFS:

- Roofing materials
  - homeowners should consider matching the roofing materials that were originally on the home when it was constructed - generally wooden shakes or shingles. However, replacing asphalt shingles in like kind is acceptable.
  - Materials:
    - asphalt 3-tab or architectural shingles "30 years" or greater
    - wooden shakes (historically split-off using a sharp blade or mallet) are appropriate for homes built before 1850 but were used on roofs as late as 1920
    - wooden shingles (sawn from a block of wood) are appropriate for homes built after 1850
    - slate (generally seen on gothic revival and Victorian structures)
    - metal roofs – were not part of Marblehead's historic architecture and are not appropriate in the districts
  - flashing should be of a dark material that will not reflect sunlight (e.g., natural copper left to weather, lead, etc.). Drip-edge material to match as close as possible to the trim it will overhang (bright aluminum is not acceptable)
- Gutters
  - Gutters on Marblehead's historic homes are integral to the roof design
  - repairs or replacements should be done in like kind.
  - Fiberglass and wooden gutters on Marblehead homes often return around the gable end of a roof (variation of a Poor Man's Return) or are coped into the raking crown molding at the corner of the structure where a straight wall meets a gabled wall (Classical Return).



- Downspouts
    - smooth or scalloped round metal downspouts are most historically appropriate.
    - wood-casing of downspouts may be required under certain circumstances
- Soffits and Fascia
    - any repairs must be done in like-kind to match materials and design that are being replaced
- Skylights and scuttles
    - Prior to the introduction of fire-resistant roofing materials, scuttles were an important way for homeowners to access their roofs in case of fire or damage. Generally aligned off the peak of the roofline, many scuttles have been removed entirely, replaced with divided glass windows, or replaced with modern skylights over the years. Scuttles should always be preserved. and it is sometimes appropriate to replace solid scuttles with divided glass skylights, or ones that match the appearance of historically appropriate skylights.
    - new skylights being added to a roofline should be confined to areas of the roof that are not visible from a public way.
    - any metal materials on or around skylights (trim, flashing, etc.) should be of dark materials to minimize light reflection and to help the skylight blend into the roof.
- Other considerations
    - All vents, including sewer line vents should be kept off the public-facing roofline, where possible, and should be made of materials that will assist the vent to blend into the roofline, including using vent materials that are dark in color or have them painted to be dark in color allowing them to blend into the roof.

SOLAR ENERGY PANELS

GUIDELINES – PHOTOVOLTAIC (PV) SYSTEMS

Photovoltaic (PV) Systems, including but not limited to solar panels and all accessory equipment, where visible from the Public Way, are not appropriate to historic buildings. Proposals for PV systems should endeavor to locate all large equipment (PV panels in particular) with no visibility from the Public Way and to minimize visibility of any smaller accessory equipment. Refer to HVAC Equipment and Components for guidelines about equipment line sets: pipes, conduits, cables, and covers. Locations with partial and/or obscured visibility will be considered at the discretion of the Commission.

WINDOWS

REPLACEMENT GUIDELINES:

- For windows that are visible from a public way, windows composed of original materials (i.e., sawn wood) are always preferred, and generally required
- Historical windows are composed of individual panes of glass, held together in sawn wooden frames (muntins). Simulated Divided Lites (SDLs) are generally not appropriate replacements. However, the proximity of the windows to the public way may allow for the use of SDLs provided that the spacer bars are dark in color and the other architectural components of the windows (muntins, rails, stiles, and sill) are all historically accurate.
- In most cases, glass panes should be vertically oriented (they should be taller, rather than wider) to be historically appropriate.
- Replacement window "inserts" are not appropriate and are generally not approved as they reduce the open space of the windows. Full frame replacements are preferred.
- There are numerous manufacturers in New England that continue to make windows that mirror historically appropriate specifications such as having 5/8" muntins, double-thick sills/stools (Brosco, Green Mountain Window, etc.). *Applicants seeking to replace windows should research their options prior to submitting an application for a COA*.
- Applicants must provide detailed information on the existing and proposed windows - including photos that show the existing window in detail, as well as "cut sheets" for the proposed replacements.
- Aluminum clad windows, vinyl clad windows, and windows constructed of composite materials are generally not appropriate in the historic districts. The Commission has made exceptions for windows with direct and immediate ocean exposure; however, applicants should always strive to use natural materials as their first course of action.
- Generic storm windows (ex. metal "triple tracks") are not under OHDC purview; however, window manufacturer-specific screens and storm panels (ex. "energy panels") are under the Commission's purview and will require a COA.

Background:

Windows & Sustainability in Historic Design:
When historic doors and windows have been properly sealed against air infiltration and augmented with storm-windows, they meet a number of important sustainability goals including the reduction of waste, reuse of existing materials, and increased energy efficiency. While homeowners often are convinced that replacement windows may solve their energy and renovation problems, outlined here are other cost-effective steps which will increase the efficiency of older windows while also maintaining historic integrity.

It also should be noted that heat loss through windows is not a problem unique to historic buildings; windows in new construction often have the same issues due to poor installation or function of the windows. Reducing air infiltration should be the first priority of any preservation- retrofitting plan.

In many ways historic structures are inherently sustainable, whether through their use or their original design. Due to Marblehead's variable weather and environment, buildings here traditionally have an overall window area that makes up less than 20 percent of the overall wall area. Windows typically are moderate in size and tend to be more prominent on the south-facing wall. South-facing windows maximize solar-heat gain in the winter and can be opened to promote air circulation in the summer. This traditional fenestration balances both the heat loss in winter and the need for light and cooling in the summer.

Non-invasive Techniques:
Many energy efficiency techniques recommended to historic building owners do not require any alteration to historic buildings. Some of these techniques include: interior hangings and curtains to help insulate in the winter and stop radiant heat gain in the summer; and the deliberate use of landscaping to block the wind in the winter and provide shade to the building in the summer. These simple techniques will reduce energy consumption through a decreased need for heating and air-conditioning. (James, Brad, Andrew Shapiro, Steve Flanders, and Dr. David Hemenway. "Testing the Energy Performance of Wood Windows in a Cold Climate": A Report to The State of Vermont Division for Historic Preservation Agency of Commerce and Community Development, August 30, 1996: 5. The study went on to conclude that "Over the course of the study, it became apparent that replacing an historic window does not necessarily result in greater energy savings than upgrading that same window.")

Existing Buildings:
- Historic windows should be preserved and restored, taking advantage of the embodied energy represented in the existing material.
- Wood storm windows are encouraged.
- Sash locks should be repaired or installed.
- If traditional weather-stripping exists it should be replaced in kind. If it does not, then weather-stripping may be installed where needed.
- Passive energy saving measures such as shutters, as well as the use of curtains are highly encouraged.

New construction and additions:
- Traditional fenestration proportions (approximately 20% of overall wall area) should be considered in the design stages.
- Single-paned wooden windows are generally required on windows visible from a public way and should be properly weatherized during installation.
- Storm windows are encouraged.

- Passive energy saving measures such as shutters and curtains are highly encouraged.
- Windows may be caulked on the interior. Care should be taken to choose a caulk that is chemically compatible with interior surfaces.

Alternative Materials:
As it pertains to these guidelines, the phrase *alternative materials* refers to any "green" or "sustainable" material that is intended as a substitute for traditional building materials. At this time alternative materials are not likely to be considered for use inside the Old and Historic Districts. However, building owners are encouraged to use sustainably harvested lumber or reclaimed materials whenever possible.

Replacement:
The selection of replacement windows should not begin with what is commercially available, but rather with what is being replaced. A major concern with most replacement windows is that they do not accurately replicate the historic appearance of the existing windows. Replacement sash should match the historic sash in pane size and configuration, glazing, muntin detailing and profile, and historic trim. Frequently, the profiles of replacement elements, such as muntins, sash, frames, and moldings, are flatter and wider or narrower and thinner than the historic profiles. A stock window may duplicate the exact number of original panes, but a change in relief affects the character of the historic window, which in turn alters the overall appearance of the entire building.

SIDING

GUIDELINES – SIDING:

Where it exists, it is always preferable to maintain the original siding of a building. When the condition of the siding has deteriorated to the point that it should be replaced, the owner should seek to preserve the appearance of the original siding to the greatest degree possible.

Clapboard siding:

- Materials should be natural – composite and man-made materials are not historically appropriate. Cedar is the most common clapboard material
- Reveal – the distance between the bottom line of two vertically-stacked rows of clapboards should match the existing reveal, or the original reveal, of the building.
- Detailing – there are three common styles of clapboards, and the building owner should replace in-kind:
    - Traditional (this is most common in the historic districts)
    - Dutch Lap (appeared in the 1880's)
    - Beaded (uncommon in Marblehead)
- Joints – modern clapboard installations typically use butt joints to continue clapboards in a single row. Butt joint are essentially 90° cuts at the end of clapboards that are then butted-up against each other leaving a vertical seam. While butt joints are effective for modern construction, clapboard installations prior to the 20th century joined clapboards with scarf joints. With a scarf joint, the ends are tapered so that consecutive boards overlap by 3" to 4". This overlapping, or scarfing, gives the siding on a building a uniquely historical character. There are simple jig designs (available with an internet search) that make the job quick and easy.
- Depending upon the age of the building, owners should seek to follow building styles that were in use during original construction. For example, a building constructed in 1744 would have had clapboards of no longer than 3'-4' with scarfed joints.
- Owners seeking to replace scarf jointed clapboards will be expected to install short length clapboards (3'-4') with scarfed joints to match the original.

Shingle siding:

- Materials should be natural – composite and man-made materials are not historically appropriate. Cedar is the most common shingle material
- Reveal – the distance between the bottom line of two vertically-stacked rows of shingles should match the existing reveal, or the original reveal, of the building.

Brick siding:

- Due to the scarcity of lime in Marblehead, brick buildings were uncommon in Marblehead's historic district before the 19th century. That makes brick buildings in the historic districts of particular significance to the town's history. Repairs to brick siding on homes should seek to match the appearance of existing materials. Using reclaimed, water-struck bricks and light-colored mortar will help maintain the consistency of appearance across the entire building. If reclaimed bricks are not available, new, water-struck bricks are acceptable.

Shiplap or Plank siding:

- There are only a small handful of examples in the district where shiplap or plank siding has been used. Repairs should match the original installation in appearance and size using natural materials (wood).

CHIMNEYS

GUIDELINES – CHIMNEYS:

- Preservation and repairs to brick chimneys should seek to match the appearance of existing materials. Using reclaimed, water-struck bricks and light-colored mortar will help maintain the consistency of appearance across the district and is reflective of the period of the building. If reclaimed bricks are not available, new, water-struck bricks are required.
- Capping – many modern chimney systems may require spark arrestors to be installed above the flues. To maintain the accurate historic appearance of chimneys while accommodating modern building requirements, owners should seek to minimize the appearance of spark arrestors, where possible, by installing dark-colored spark arrestors obscured beneath a bluestone or slate cap set on brick pillars. The arrestors can sit atop each individual flue or have a single arrestor that sits atop all flues but is not covering the entire flaunching (top) of the chimney. The dark color will allow arrestors to blend into the shadow line cast by the stone cap.
- Re-building – when a chimney must be re-constructed the owner should seek to re-use the existing bricks and maintain the appearance of the chimney as it existed prior to its reconstruction and consistent with historically appropriate designs.

HARDSCAPE

GUIDELINES FOR HARDSCAPE:

- Prior to the 20th century, most walkways, streets, etc. were composed of softscape – essentially dirt, grass, weeds, etc. Hardscapes were not common and many streets in Marblehead's Old & Historic district remained dirt until the 1950's. Converting publicly visible soft-scape to hardscape, or changing existing hardscape materials on a property, is subject to review for historical appropriateness by OHDC.
- When new hardscape abuts public or private lands, an application must include the following:
    - A property survey less than one (1) year old, stamped and signed by a Massachusetts registered surveyor. The survey shall be drawn to scale and shall show the entire property as well as the footprints of all structures on the property. A scaled facsimile of the property survey is permitted in lieu of an original.
    - A scaled site plan, including all relevant property setbacks, the proposed parking area/driveway with dimensions, and identification of all hardscape features (walks, walls, fences, steps, etc.) and their respective materials that comprise the proposed work. At least 1 individual parking space shall be indicated. Spaces shall be drawn as 9ft. x 18ft. rectangles and may not overlap. If the area of work encompasses an existing or new grade change in excess of (1') one foot, topographic contours of existing and proposed grades shall be included in (6") 6 inch vertical increments.
    - A minimum of one (1) color photograph showing the area of proposed work.
- Materials
    - Materials that <u>are</u> generally historically appropriate include:
        - natural stone
        - water-struck brick surfaces, including ribbons
        - cobbles
        - native pea stone
            - Size: ¼"-3/4"
    - Materials that are generally <u>not</u> historically appropriate include:
        - concrete or artificial "pavers"
        - river stones
        - asphalt
        - concrete, including surfaced aggregate

UTILITIES

GUIDELINES FOR UTILITIES:

Property owners should not place utilities (to include electrical and communication lines, electrical meters, water meters, natural gas meters and hookups, propane tanks, EV chargers, etc.) and their associated equipment and lines on primary facades of a building, or on a side facing a public way. Ideal installations will push this equipment as far back from the public way as possible. Installations that are not visible from a public way are preferable or should otherwise be concealed.

HARDSCAPE WALLS

GUIDANCE FOR HARDSCAPE WALLS:

Stone walls are common throughout the districts. In addition to dividing adjacent properties, they often act as borders defining street edges. In this capacity, they serve a critical role in creating the street which has a historic appearance that should be preserved. To this end, any modifications to walls, particularly those along streets and ways, should be avoided or designed to minimize erosion of the street edge.

Walls in Marblehead's historic districts were generally drystone (dumped or tossed) walls made from stone recovered on the property or in the general vicinity. Many were later mortared to provide stability. In locations with high visibility from public ways, this same style of wall is most historically appropriate. Stone materials should match stones indigenous to Marblehead which are generally dark grey. Walls made of stones that are not indigenous (Pennsylvania fieldstone, colonial wallstone, antique granite wallstone, etc.) are not always appropriate in publicly visible walls. Veneered walls use thin strips of stone mortared to cinder block or concrete walls to create the appearance of actual drystone walls. In some cases, veneered walls may be acceptable if they match appropriate styles and materials.

Walls in Marblehead’s Old & Historic Districts are typically constructed of rubble walls.

PARKING

GUIDANCE FOR NEW OR MODIFIED PARKING, AS WELL AS MINOR DRIVEWAY PARKING WORK:

Most applications related to parking will be deemed to have the potential to affect either abutters or the Town, in which case they will be scheduled for a Public Hearing. All applications to the OHDC for new or alterations to existing parking must include the following:

1. A **property survey** less than one (1) year old, stamped and signed by a Massachusetts registered surveyor. The survey shall be drawn to scale and shall show the entire property as well as the footprints of all structures on the property. A scaled facsimile of the property survey is permitted in lieu of an original.
2. A **scaled site plan**, including all relevant property setbacks, the proposed parking area/driveway with dimensions, and identification of all hardscape features (walks, walls, fences, steps, etc.) and their respective materials that comprise the proposed work. At least 1 individual parking space shall be indicated. Spaces shall be drawn as 9ft. x 18ft. rectangles and may not overlap. If the area of work encompasses an existing or new grade change in excess of (1') one foot, topographic contours of existing and proposed grades shall be included in (6") 6 inch vertical increments.
3. A minimum of one (1) **color photograph** showing the area of proposed work.

Applicants should also be aware that new or alterations to existing curb cuts require completion of the Curb Cut Sign-off form (available at the Marblehead Building Dept.) which requires the following:

- Dig Safe Number.
- Signature from the Building Department.
- Signature from Old and Historic Districts Commission.
- Signature from the Highway Department.