

Adaptation Without Loss:

Developing Design Solutions and Guidelines for Elevating Historic Buildings in Newport's Point Neighborhood

Roger Williams
University



Stephen White, AIA; Dean
Gregory Laramie, AIA; Associate Dean

Helen Johnson, Preservation Planner
City of Newport



THE 1772 FOUNDATION



Guiding Principles

- Builds on Roger Williams previous involvement with the 2016 Keeping History Above Water: Newport conference as a co-sponsor and presenter
- Is the product of our collaborative “Neighborhood Revitalization + Teaching Practice” initiative framed with support from the 1772 Foundation, 2018-to date.
- The City of Newport, RI’s 2018 revision of the Historic District Commission’s Certificate of Appropriateness application process

The Neighborhood Revitalization Teaching Practice Pilot Program
brings the 1772 Foundation's support for revolving funds and education
together.

This fosters the multi-sector integration
needed among developers, non-profits,
government, and academic institutions
to improve **Neighborhood Revitalization**
project quality.



A collaborative **Teaching Practice**
model for higher education provides
education and training for graduate
students and all members of the
project teams on live projects.

1772 Foundation Support

- Funding for team teaching—Roger Williams Faculty, City of Newport preservation and planning leaders—honoraria for consultants, course materials, transportation
- Model led to 2018 curriculum revision to create shared graduate project-based elective and required courses for Architecture, Preservation, Planning students and faculty. Degree + certificate opportunities. students in the course
- Ethos of our school is evolving to collaborative rather than segregated approaches to conservation, revitalization, development. Context, perspectives are out in the open



ARCH.416 / ARCH.517

Advanced Topical Studio: Urban
Graduate Collaborative Revitalization Studio

Students:

Christopher Belmonte
Adam Carceller
Lauran Cincotta
William Clarkson
Ben Converse
Anakin Geisler
Eline Hilgersom

Luigini Luc
Joselynn Lyford
Francesca Maddalone
Brendon Sica
Scott Toth
Ashley Zannini
Samuel Ziccardi

Instructors:

Stephen White, Gregory Laramie, Helen Johnson



ARCH.416 / ARCH.517

Advanced Topical Studio: Urban
Graduate Collaborative Revitalization Studio

- A1 – Documentation & Analysis
- A2 – Conceptual Design: Non-Contributing Adaptation
- A3 – Conceptual Design: Contributing Adaptation
- A4 – Conceptual Design: New Construction
- A5 – Material and Detail Development
- A6 – Certificate of Appropriateness Submission



HISTORIC DISTRICT COMMISSION
POLICY STATEMENT and DESIGN GUIDELINES
FOR ELEVATING HISTORIC BUILDINGS

CITY OF NEWPORT DEPARTMENT OF ZONING AND INSPECTIONS
 43 Broadway, Third Floor Newport, Rhode Island 401-845-5472 www.cityofnewport.com

By motion of the Historic District Commission at their January 21, 2020 meeting, the following guidelines and standards were adopted concerning the elevation of buildings within Newport's Historic Districts:

- Appendix A: Graphical Support to Building Elevation Design Concepts
- Appendix B: Additional Flood Mitigation Options for the Homeowner
- Appendix C: Landscape Best-Practices and Recommendations Related to Flood Mitigation and Building Elevation

Newport has historically been plagued by significant flooding issues in its low-lying areas in part due to the development on filled-in land where marshes once stood. However, in recent years there has been an intensification of flooding due to hurricanes, severe storms and high tides. Newport's Historic District Commission has concluded the best policy for the long-term preservation of historic structures is to support elevating structures to FEMA requirement, when necessary.

Newport is aligned with federal and state guidelines regarding flood adaptation for historic buildings. United States Department of the Interior Memorandum dated November 18, 2019 – "Changing weather patterns, stronger hurricanes, and other extreme weather events have increased the risk of flooding, both in terms of frequency and magnitude. Historic properties that have never flooded before are now exposed to this risk, and those that flooded infrequently in the past are experiencing more instances of flooding with water reaching higher levels than ever before."

This document focuses on four key areas to guide elevation projects for historic buildings:

- 1) Streetscapes and Context Consideration
- 2) Site Design Consideration
- 3) Foundation Design Consideration
- 4) Architecture and Preservation

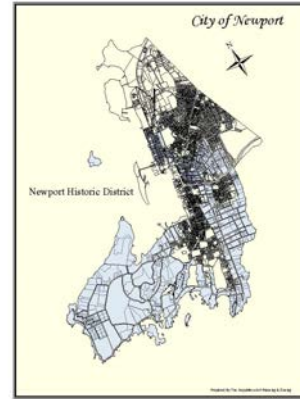
Building Categories:

- **Contributing Buildings**
 - All elevation projects require Commission review and subsequent approval.
 - All elevation projects must demonstrate that the building is in the FEMA Flood Zone with a Flood Elevation Certificate defining Base Flood Elevation (BFE).
 - All Streetscape, Context, Site Design, Foundation Design, Architecture and Preservation Guidelines in this document are mandatory for these structures.
 - Encourage the use of FEMA Historical Structures Variance to minimize change to only that height necessary to avoid flood hazard. Maximum height allowable is Base Flood Elevation (BFE) plus one (1) foot.
 - Before being approved for elevation, applicants must provide thorough documentation of the building in its existing state, to include 'As-built' elevations, floor plans, building
 - iii. BFE is measured at the bottom of the lowest non-water resistant, horizontal structural member (of the first floor).
 - b. **Sister Houses.** 2 or more houses built side by side with identical (very similar) dimensions, floor plans and architectural details. Usually constructed by same builder or same family.
 - c. **Adjoining or Adjoined Buildings.** 2 or more buildings of separate address, separate floor plan and likely separate ownership that are adjoined by a common wall.

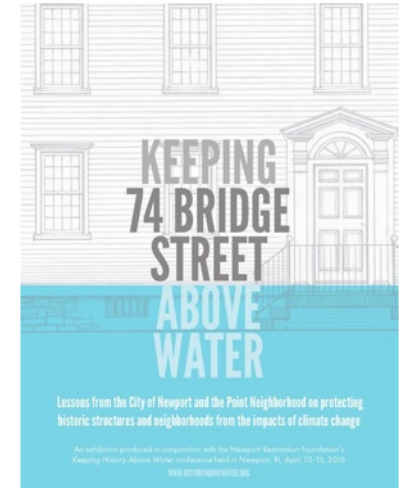
The above criteria are intended as general guidelines to give property owners, architects, builders and others involved in presenting elevation projects to the Historic District Commission general awareness of the Commission's expectations.

APPROVED BY RESOLUTION:

K.A. Bjork 1/21/2020
 Chair, Historic District Commission Date



Newport
 Restoration
 Foundation



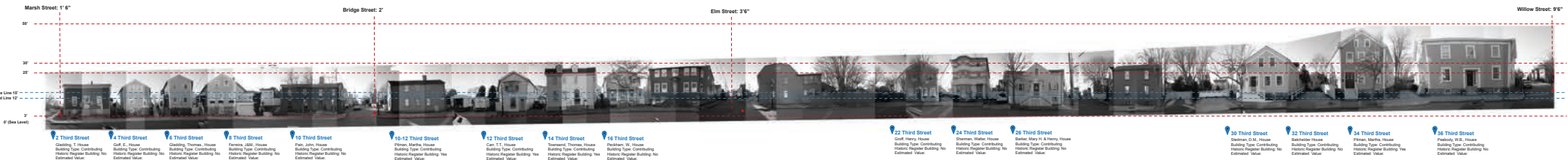
Assignment 1 – Documentation & Analysis



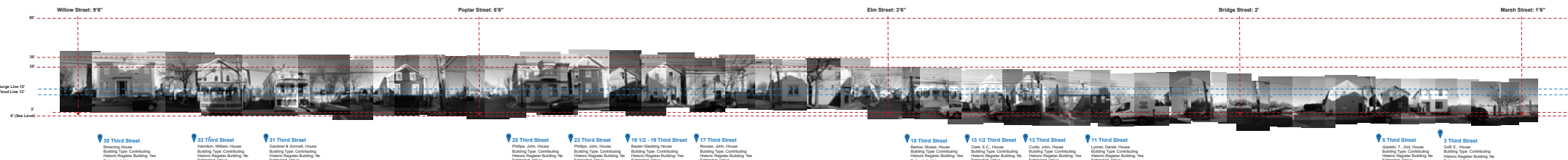
Flood Policy Rates are based on where the building's first floor sits in relation to the Minimum FEMA Flood Map Elevation



Third Street West, 2020



Third Street East, 2020



Assignment 2 – Conceptual Design: Non-Contributing Building

Assignment 3 – Conceptual Design: Contributing Building

Assignment 4 – Conceptual Design: New Construction



Assignment 5 – Material & Detail Development

Non-contributing Building Adaptation

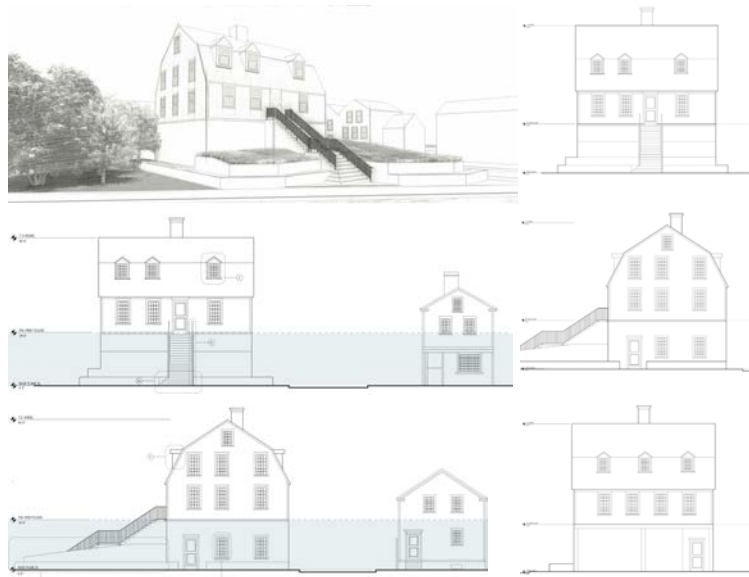
ADAPTATION WITHOUT LOSS: 56 BRIDGE STREET



56 Bridge Street has long been seen as the gateway to Newport's historic Point neighborhood, being one of the first houses seen when entering. An imposing, hunkered-down gambrel roof makes the 18th century house iconic.

The existing property has an elevation of only 4'-0" above sea level, making it uniquely vulnerable to rising sea levels. To adhere to FEMA guidelines, the proposed changes elevate the building 16'-0" above sea level. Such a drastic elevating of the building requires that it be set back on a generous terrace in order to soften the impact had by raising the structure. Landscaping and stone landscape walls are proposed as part of this approach, generating greenspaces that respond to the streetscape.

Elevating the house 16'-0" above grade permitted the space below to be used for parking, something that is at a serious premium in the Point neighborhood and is ideal given the building's commercial use. Because of this, an elevator lift was also integrated within the footprint of the building in order to satisfy the accessibility requirement seen with non-residential structures.



FRANCESCA MADDALONE
NON-CONTRIBUTING HOUSE
ARCH 416/517 - Collaborative Revitalization Studio - S. White/G. Laramie - Spring 2020

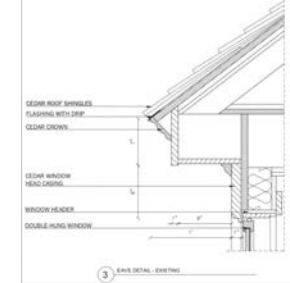
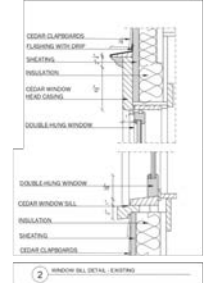
Assignment 5 – Material & Detail Development Submission

Contributing Building Adaptation

ADAPTATION WITHOUT LOSS: 78 BRIDGE STREET

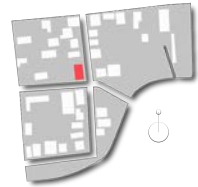


78 Bridge Street was built in 1750 as a colonial style residence. The proposal for raising the building is 12' as per FEMA guidelines since existing grade elevation is 4'. The building has been recently renovated, which includes window replacement and some reworking of the original floor plan. In this scheme, the front staircase could not be overlooked. In this proposal the house has been raised to a relocated 9'-10" foundation height to create space for the front stair as well as allow for pedestrian utilization of the sidewalk. The relocation of the building will not affect the neighboring buildings. The house will have a new pier foundation, composed of heavy timber members, that is enclosed with a break-away louvre system that allows the water to flow underneath the building when a flood or storm surge would occur.

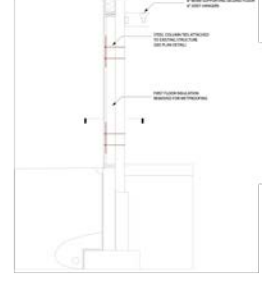
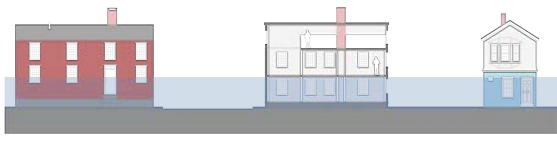
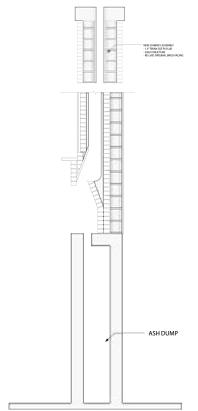
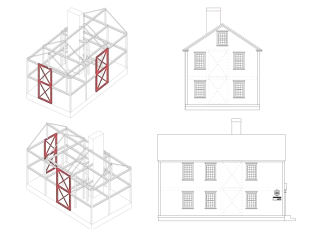
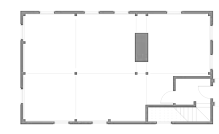
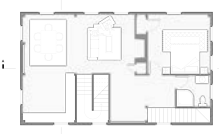
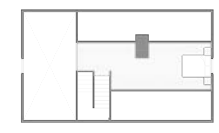


ELINE HILGERSOM
CONTRIBUTING BUILDING
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ADAPTATION WITHOUT LOSS: 59 BRIDGE STREET



In this studio, we focused on the Point neighborhood in Newport, RI, which is in grave danger of being destroyed by rising sea levels. This project proposes the primary living space be relocated to the second floor only and that the first floor be abandoned in the event of a neighborhood wide storm surge. In order for this to be achieved, a steel frame will need to be inserted into the house. As a result the house would gain a new interior and a carefully restored chimney with modern and original materials. This proposal retains the historic frontage of the neighborhood while offering a beautifully renovated interior. With this project there are no variance requests or landscape changes, and preservation of the original historic entrance. It renovates the house into a one bedroom home with a loft, as well as a wet-proofed storage space on the first floor. The house sits at elevation 5'. In the event of a flood, residents will be safely above the Base Flood Elevation of 15' above sea level.

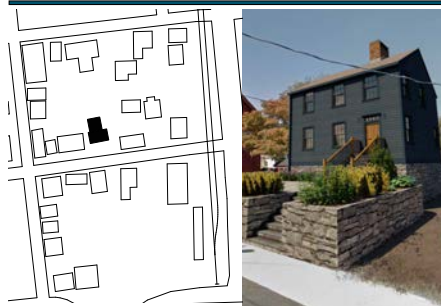


CHRISTOPHER BELMONTE
CONTRIBUTING BUILDING
ARCH 416/517 - Collaborative Revitalization Studio - S. White/G. Laramie - Spring 2020

Assignment 5 – Material & Detail Development Submission

New Construction

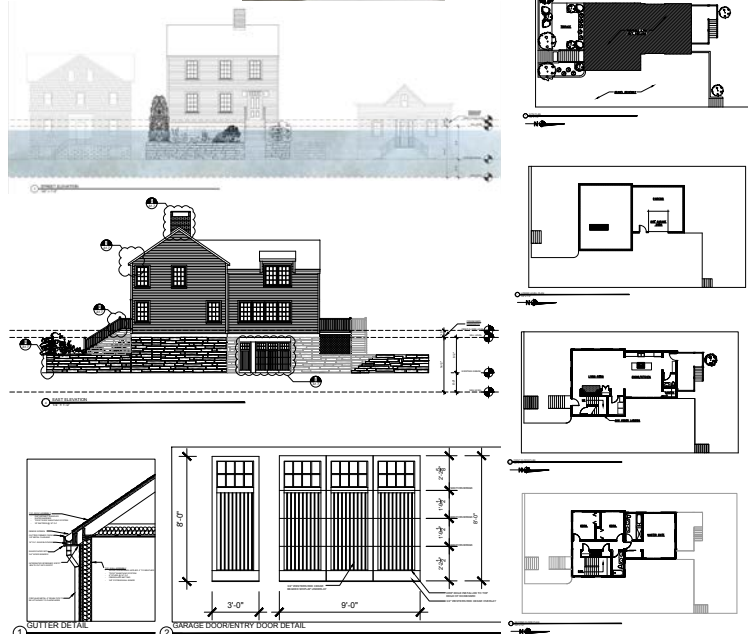
ADAPTATION WITHOUT LOSS: 23 ELM STREET



The lot at 23 Elm Street sits at roughly five feet above sea level - anything built in this location will have to sustain chronic sea level rise. As such, an elevation of nine feet and two inches is incorporated into this new-construction home in order to mitigate the impacts of climate change.

The proposed structure at 23 Elm Street takes into account what is appropriate for life in the Point neighborhood. This proposal reconciles the challenges found with elevating homes, primarily through making use of a front garden in order to soften the height of the structure. The front garden and terrace provides access to the entry as well as a space in which to engage the neighborhood. In doing so it serves a dual purpose - softening the impact dealt by taller structures and bringing the street and house together.

The Elm Street house respects the historic character of the neighborhood while sustainably responding to the threat sea level rise and worsening storm surges.



BEN CONVERSE
NEW CONSTRUCTION
ARCH 416/517 - Collaborative Revitalization Studio - S. White/G. Laramie - Spring 2020

ADAPTATION WITHOUT LOSS: 49 POPLAR STREET



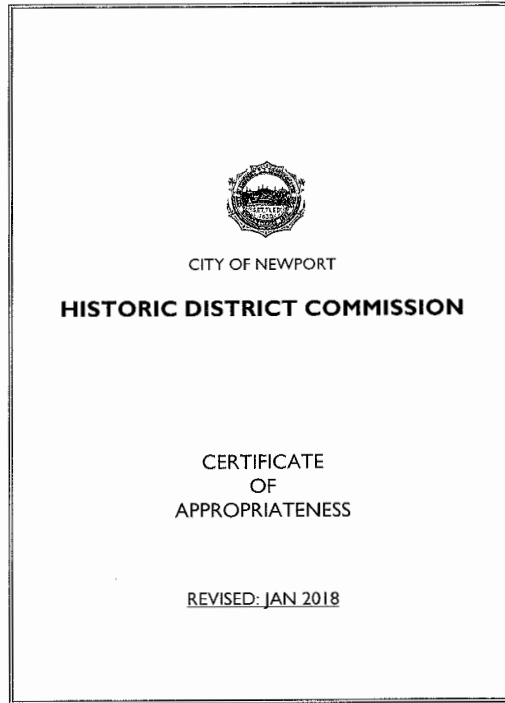
Newport's historic Point neighborhood is at critical risk of flood damage from rising sea levels. This poses an especially serious threat to the many historically significant and protected properties. As part of the collaborative revitalization studio at Roger Williams, I developed a scheme for a new construction home at 49 Poplar Street that reconciles the need to respect the historic character of the neighborhood with the modern needs of chronic sea level rise and subsequent FEMA flood guidelines.

The house needed to be uniquely modern and yet respectful of the historic streetscape. To achieve this, more modern and contemporary materials and methods were deployed, such as a standing-seam steel roof and board-and-batten siding. Additionally, zoning variances and local code requirements had to be considered and argued for in order to create a house that is respectfully modern and responsive to an uncertain future.



SCOTT TOOTH
NEW CONSTRUCTION
ARCH 416/517 - Collaborative Revitalization Studio - S. White/G. Laramie - Spring 2020

Assignment 6 – Certificate of Appropriateness Submission



NEWPORT HISTORIC DISTRICT COMMISSION

DEPARTMENT OF ZONING & INSPECTIONS
43 Broadway, Newport, Rhode Island 02840
401.846.9600 (City Hall) 401.845.5357 (Preservation)

Received by the Zoning and Inspections Department:

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

Please complete this application in BLACK or BLUE ink only.
Illegal/incomplete applications will be returned to the applicants.
Hearing Dates and Filing Deadlines are posted at City Hall and www.cityofnewport.com.

GENERAL INFORMATION

PROPERTY ADDRESS: 75 Bridge Street (Currently vacant lot)	Plat: 16-060	Lot:
Property Name (if any, including historic):	Original Date of Construction:	
APPLICANT (Legal Owner of Record): Lauren Cincotta	Telephone:	Email: lcincotta007@gr.wvu.edu
Mailing Address: 1 Old Ferry Road Bristol, RI 02809		
LEGALLY AUTHORIZED REPRESENTATIVE:	Telephone:	Email:
Mailing Address:		

ADDITIONAL INFORMATION CHECKLIST

- Y N Is the application fee included? (See attached General Fee Schedule)
- Y N Is the property in condominium ownership? If yes, proof of board or association approval must be attached.
- Y N Is this application filed in response to a violation notice?
- Y N Is this application a modification of plans previously approved (date(s) _____) by the HDC?
- Y N Does this project require other approvals? Zoning CRMC _____ Other (describe): _____
- Y N Does access to the subject property require special arrangements? _____

SUMMARY OF PROPOSED WORK

Describe all proposed exterior alterations to the subject property here.
Do not leave this section blank.
Check off all applicable categories below.

Structure will be elevated 12 feet above existing grade to meet FEMA Base Floor Elevation (BFE) level. Yard will be raised 4 feet above grade. Stairs will be increased to accommodate structure elevation.

Existing southern addition will be demolished and existing porch will be joined to main structure frame. Dormer windows added to second floor on east side.

Gambrel roof will be wrapped around north facade of structure to minimize look of height.

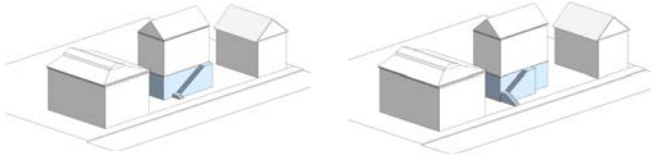
Stone retaining wall added in front of north elevation to cover portion of new foundation and accommodate vegetation to create privacy in the yard.

- Y N Repair/replacement of exterior architectural features?
- Y N Minor Alteration(s) – Any alteration(s) that replace existing building features or any new construction of less than 25% of the existing structure's square footage?
- Y N Major Alteration(s) – Any addition(s) of more than 25% of an existing structure's square footage or any new freestanding structure(s)?
- Y N New Construction?
- Y N Demolition?
- Y N Roof(s) or skylight(s)?
- Y N Window(s) or door(s)?
- Y N Porches or Entries?
- Y N Chimney(s)?
- Y N Foundation?
- Y N Mechanical and/or electrical equipment?
- Y N Shutters or awnings?
- Y N Sign(s)?
- Y N Pools and/or site structures?
- Y N Other? Describe: stairs, retaining wall

Afterwards: Design Guidelines (unfinished)

B2. (All) Maintain a **distinct stair connection to the sidewalk**. [Reference A3.1](#)

[A3.1. Relationships of entrances to the street]



The diagrams illustrate an appropriate front stair and its relationship to the street.

B3. (Contributing) **Entry stairs** are consistent in design and material with the architectural style of the building.



Appropriate
The material used for the stairs is consistent with the foundation material.



Appropriate
The material used for the stairs is consistent with the foundation material.

Newport Historic District Commission Guidelines

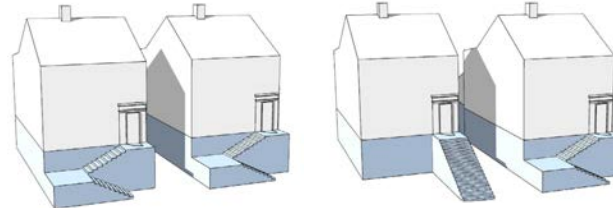


Inappropriate
The material used for the stairs is not consistent with the foundation material.



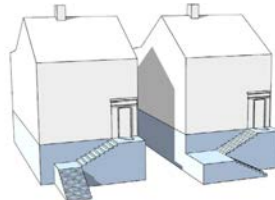
Inappropriate
The material used for the stairs is not consistent with the foundation material.

A5. (All) When **elevating sister houses**, ensure that buildings are architecturally congruent within the grouping. A high quality of design and execution is required for all elevated buildings within a grouping.



Appropriate
The diagram illustrates an acceptable stair for the two elevated sister homes. This is acceptable because both homes are utilizing the same strategy to elevate their homes.

Inappropriate
The diagram illustrates an inappropriate stair for the two elevated sister homes because the design implemented is not similar. Furthermore, this approach results in one home to be pushed back on the site, resulting in different locations on the plot.



Appropriate
The diagram illustrates an acceptable stair for the two elevated sister homes. This is acceptable because both homes are utilizing the same strategy to elevate their homes.

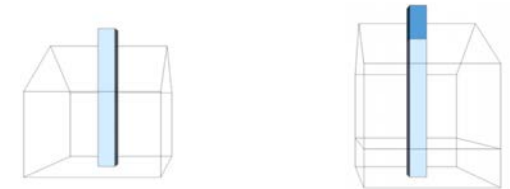
Newport Historic District Commission Guidelines

D3. (A) **Chimney** options (in order of preference):

.1 Retain chimney and elevate with the structure



.2 Elevate the house around the chimney and extend the chimney accordingly with materials to match



.3 Other chimney options require an engineering report and recommendation

Newport Historic District Commission Guidelines

Afterwards

- HDC Guideline Revisions
- Zoning Implications
- Work in the neighborhood

