



# Highlands Center at Cape Cod National Seashore Site and Building Design and Rehabilitation Handbook

*Final Draft*



September 2005

---

---

## CONTENTS

---

<b>1</b>	<b>Introduction</b>	<b>1</b>
	A. Purpose of the Handbook	1
	B. Contact Information	3
<b>2</b>	<b>Principles for Environmental Sustainability</b>	<b>4</b>
	A. General Sustainability Guidelines	4
<b>3</b>	<b>Architectural Design Guidelines</b>	<b>7</b>
	A. Site Characteristics and Goals	9
	B. Common Guidelines for Buildings	10
	C. Gateway Guidelines	14
	D. Quadrangle Guidelines	15
	E. North Side Guidelines	17
	F. Housing Guidelines	19
	G. Outdoor Experience Guidelines	21
<b>4</b>	<b>Site and Sign Design Guidelines</b>	<b>24</b>
	A. Planting Modifications	24
	B. Utility/Service Treatments	25
	C. Parking, Loading and Circulation	26
	D. Open Space Connections	29
	E. Site Furnishings and Objects	30
	F. Sign Design Guidelines	32
<b>6</b>	<b>Reference List</b>	<b>34</b>
<b>7</b>	<b>Acknowledgements</b>	<b>36</b>

**APPENDIX (In Separate Document)**

Appendix A. Green Building Guidelines

Appendix B. Native Plant List

Appendix C. Applicable Building Codes and Landscape Regulations

Appendix D. Hazardous Materials Mitigation Remediation and Disposal

Appendix E. Project Development and Review

## 1 INTRODUCTION

---

### A. Purpose of the Handbook

Program participants and Management and Program Partners of the Highlands Center (hereafter referred to as “Partners”) will enjoy the unique experience of living and/or working within the federally protected oceanfront lands of Cape Cod National Seashore. This *Site and Building Design and Rehabilitation Handbook* (hereafter referred to as the “Handbook”) clarifies the Partner’s role and responsibilities while residing and/or working within the boundaries of the national seashore. This handbook is meant to cover every stage in the course of rehabilitating leased buildings and beautifying the surrounding landscape.

The opportunities, ideas and possibilities that can make the Highlands Center a vital, energetic and inspirational research and learning center are extensive. The physical goal of the center is to present a series of unified program areas that blend together into a cohesive form. The challenge facing rehabilitators is to plan ahead for the organization of and relationships between open space, buildings, and program areas rather than allow the landscape to be fragmented or be without a thematic approach. To protect and realize the Highlands Center vision, new site elements must reflect the overall goals, relate to their immediate surroundings and be integrated into the landscape gracefully, allowing for a seamless flow of experiences, imagery and surprise.

This Handbook clarifies the process for achieving success in site redevelopment and changes. The overall purpose is to identify the National Park Service (NPS) approach to proposed changes, modifications, and additions for all leased space at the Highlands Center at Cape Cod National Seashore. *Fundamental goals of the NPS are the reuse of vacant, reusable buildings at the site, promotion of a diverse community representing arts, culture and environmental sciences, and the perpetuation of the vernacular architectural character of the buildings with modest, complementary physical changes in most cases.* While the site is not designated historic, the Cold War architecture of the buildings does represent a unique period in our country’s history and it is the desire of the NPS to honor the character of the site wherever possible, and to accommodate needed modern enhancements.

Recognizing that the Highlands Center is a place for creativity and inspiration, the intent of the guidelines is to provide specific direction where necessary while allowing for individual ideas and applications to drive the design process where appropriate. In addition, this Handbook offers guidance to Program Partners and is not intended to supersede lease terms in any way, pursuant to 36 Code of Federal Regulations Part 18: NPS Leasing Regulations.

The Handbook answers questions about practices that are:

- Acceptable at the leased site

- Required or excluded by National Park Service “Management Policies 2001” or other policy guidance
- Recommended but not required in the building rehabilitation and landscape site design process

Throughout the Handbook, there is reference to “required” procedures and “recommended” procedures. Those items described as “required” are mandatory under these guidelines and compliance is necessary to maintain lease status and receive construction and occupancy permits. Those elements described as “recommended” are to be complied with wherever possible, unless to do so would cause extreme financial hardship or is physically impossible in some way.

Numerous individuals and NPS offices were consulted throughout the creation and revision of this Handbook. Key among the reviewers were the NPS leasing team, NPS regional office specialists and consultants, Cape Cod National Seashore staff, and Highlands Center fundraising and program partners and their consultants. Their involvement and contributions have resulted in a set of comprehensive guidelines that take into account the considerations and concerns of stakeholders and the NPS. Any request for modification of the guidelines must be made to NPS and Highlands Center, Inc. (HCI), its Management Partner. A Design Advisory Committee may be established by NPS and HCI for the Highlands Center for this purpose. Due to its ultimate legal responsibility for administering the Highlands Center, the NPS will act as the final decision maker.

In conclusion, these guidelines were developed to provide a common design language and to guide the rehabilitation process towards a cohesive space. Common concepts and vocabulary will streamline the process and provide for a successful rehabilitation and design of both the site itself and the buildings on it. Read the Handbook carefully and keep it on hand for easy access to important phone numbers and other necessary information. If the Partner encounters a problem that is not addressed specifically in this document, the Partner should refer questions to the NPS. Contact information can be found in on the following page.

## **B. Contact Information**

### **Cape Cod National Seashore Headquarters**

**Lauren McKean**, NPS Highlands Center Project Manager  
Cape Cod National Seashore  
99 Marconi Site Road  
Wellfleet, MA 02667

Phone: 508-349-3785 ext. 208

Fax: 508-349-9052

E-mail: [lauren\\_mckean@nps.gov](mailto:lauren_mckean@nps.gov)

Web site: [www.nps.gov/caco/](http://www.nps.gov/caco/)

Referrals to other NPS park or regional office staff or Highlands Center, Inc. will be made on an as-needed basis for the following:

- Security and Park Regulation Issues
- Hazardous Materials
- Natural Resources and Integrated Pest Management
- Life Safety and Fire Issues
- Archeological Clearance for all Proposed Ground Disturbance (Digging) Activities
- Leasing and Permitting
- Design, Construction and Permitting
- Fundraising for Capital Projects

---

## 2 PRINCIPLES FOR ENVIRONMENTAL SUSTAINABILITY

---

The Highlands Center will represent a model of environmental sustainability by using sustainable practices and technologies in design, building rehabilitation and ongoing operations. Sustainability can be simply or elaborately accomplished. Simple systematic thinking in site planning and building design can accomplish energy efficiency, material resource conservation, indoor environmental quality, and water conservation and protection.

The renovation of Highlands Center buildings, facilities, and infrastructure is expected to reflect the overarching theme of environmental consciousness and sustainability and to be a showcase for regionally appropriate and environmentally sensitive development. Building rehabilitation is generally inherently sustainable as the wasteful practice of full demolition and rebuilding is avoided. The NPS's philosophy that special emphasis be placed on the incorporation of "green" practices in all of its operations applies to the Highlands Center redevelopment process. Materials and energy usage impacts therefore should be analyzed over the entire life span of the project and not just for the initial investment phase.

The NPS emphasis on utility infrastructure used to support the community will also rely on sustainable approaches. Such approaches could include the use of wind and solar power, innovative and alternative approaches to wastewater treatment, energy and water conservation measures, and approaches to solid waste management that encourage reuse, recycling, and minimization.

Partners are strongly encouraged to incorporate sustainable principles into their proposals. The U.S. Green Building Council's voluntary Leadership in Energy and Environmental Design (LEED) Green Building Rating System provides a framework of state-of-the-art strategies to accomplish sustainable design. Partners are encouraged to consider such standards and the LEED certification process.

### A General Sustainability Guidelines

Sustainable design can be simply or elaborately accomplished as illustrated by the general examples below:

#### **Sustainable Site**

- Establish common parking areas, confining vehicular access to the periphery of the built area.
- Use summer shuttle services for events.
- Enable and encourage bicycle and pedestrian use through careful site design and access ways.

- Conserve water by consumption reductions, native plantings, and temporary minimal/timed drip irrigation systems.
- Prevent pollution and protect groundwater resources.
- Limit site disturbance and promote site restoration and open space.
- Investigate storm water collection systems for irrigation use.
- Consider sound emissions of activities and limit light pollution from exterior lighting to preserve natural quiet and night sky.
- Integrate pest management methods that stress the least toxic, minimal amounts possible and are targeted to specific species.

### **Energy and Atmosphere**

- Promote energy conservation through energy efficient construction methods, systems, fixtures, appliances and controls.
- Maximize the use of natural daylight.
- Promote the use of renewable energy and energy self-reliance through the harnessing of wind and solar power for power generation.
- Promote alternate fuels for fleet vehicles.
- Integrate passive heating, passive cooling and natural ventilation into building design.
- Minimize potential air pollutants.
- Use plant material groupings as windbreaks, privacy barriers, shade, etc.

### **Materials and Resources**

- Maximize resource reuse through the use of recycled construction materials.
- Restrict the use of toxic materials such as PVC, chlorine based compounds, treated wood products, and ozone depleting compounds.
- Restrict use of tropical woods to those available from sustainable forest programs.
- Establish a comprehensive recycling program to minimize the amount of waste destined for landfills.
- Implement a construction waste management program to recycle construction scraps and reuse construction fill.
- Encourage the use of sustainable wood products.

### **Indoor Environmental Quality**

- Use environmentally friendly furnishings and cleaning products.
- Provide a high degree of thermal and lighting control to the occupants.
- Implement an indoor air quality management program for construction.
- Use windows and doors to maximize natural airflow/ventilation.

### **Water Efficiency**

- Install alternative septic systems such as re-circulating sand filters, incinerating toilets, and composting toilets to reduce the load on the wastewater treatment systems.

- Promote water conservation by consumption reductions, and consideration of reclaiming and recycling of rainwater as a source of on-site water for landscape irrigation.
- Use low-flow water fixtures in buildings.

Note: Options for green building practices are included in Appendix A to this handbook available in a separate document.

---

### **3 ARCHITECTURAL DESIGN GUIDELINES**

---

The Highlands Center is situated on a 110-acre site overlooking the Atlantic Ocean. The guidelines outlined in this section of the Handbook protect the general scale and architectural cohesiveness of the built environment while encouraging adaptive reuse of between 25 to 45 buildings for programming and support functions. The conceptual NPS “Landscape Site Plan” presented here illustrates the existing built environment and some anticipated site improvements. To improve the appearance and environmental condition of the Highlands Center selected structures and facilities are intended for demolition by the NPS, and additional structures may be demolished if appropriate uses cannot be found for them or that is most desirable.



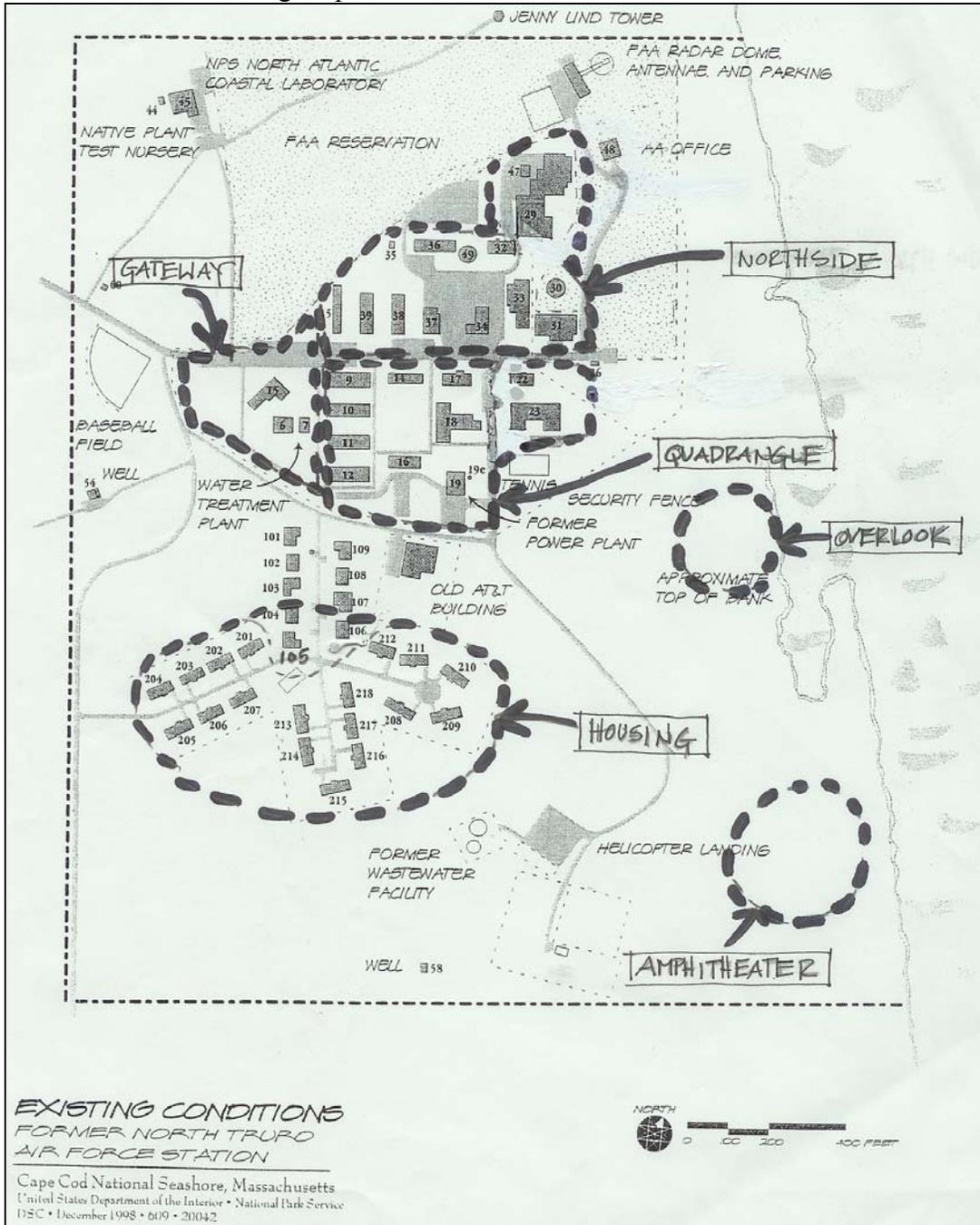
The Architectural Design Guidelines apply to exterior rehabilitation only and are not intended to discourage creativity or innovation. NPS is not seeking a major architectural transformation of the site. Rather, this section sets out a design framework that uses some basic elements of vernacular Cape Cod architecture as a cohesive design element on the site and then encourages greater design expression in other areas. Overall objectives of architectural guidelines include:

- Maintain common design elements for all buildings and establish a cohesive campus
- Encourage creativity and innovation in design modifications, where appropriate
- Encourage a high level of design quality



## A. Site Characteristics and Goals

The Highlands Center site is organized into five general sub-areas according to building style and site layout: gateway, quadrangle, northside, housing, and outdoor experience. These areas are indicated on the following map:



The buildings and spaces within any given sub-area relate to one another in use or form and it is intended that structures within these clusters have similar design elements. For this reason, these architectural guidelines are organized by both common guidelines for buildings and by sub-area.

## **B. Common Design Guidelines for Buildings**

The following guidelines present sound design principles and allow for creative range of expression respectful of the Cape environment and of a cohesive campus environment.

While each of the sub-areas on the site has slightly different guidelines, allowing for appropriate levels of creativity and innovation, there are common guidelines for elements that provide a unifying theme on the site. Some of these elements include a range of choices for exterior cladding, window proportions and types, and exterior colors.

### **General Character**

- The general aesthetic of the site – uncomplicated shapes, uncluttered façade surfaces – shall be respected wherever possible.
- A weathered, scrubbed look is desirable for buildings and improvements on the site reflecting the overall nature of the site and Cape architecture. The look of the pitch pines, heathland ground cover, and weathered shingles are all icons of Cape Cod and shall be retained and supported wherever possible on the Highlands Center site.
- Existing elements should be retained or replaced in kind, wherever possible and appropriate.
- Renewable resource systems and materials are strongly encouraged to showcase sustainable approaches. Advance approval of exterior features is required and proposals are evaluated on a case-by-case basis.

### **Exterior Materials**

- Exterior cladding shall be composed of natural or recycled materials.
- No vinyl or aluminum cladding shall be used for siding or trim except in the case of recycled materials that meet the guidelines set forth in this section.
- Cladding should not change or alternate from front to side to rear elevations if this would be inconsistent with other surrounding buildings.
- Preferred exterior cladding materials include white cedar shingles and clapboards, cedar plywood sheathing, and composite/cement cladding with appropriate shingle or clapboard-type finish (preferably with recycled materials used). The use of cedar eliminates ongoing maintenance and painting requirements and should be left to weather naturally.
- Recycled and “green” materials are encouraged. These materials should be compatible with natural wood materials.

- Brick, stone, stucco, Exterior Insulation and Finish Systems (EIFS), and concrete block may be used where masonry materials are needed to repair or rehabilitate existing masonry structures.
- Building-integrated photovoltaic systems on façades or roofs and solar hot water systems can be considered and will be reviewed on a case-by-case basis.

## **Colors**

- The choice of colors shall reflect the Cape Cod palette of traditionally muted or neutral colors, although exceptions will be considered. Preferred colors include but are not limited to natural weathered cedar, gray, tan, beige, brown, blue, and white.
- Natural materials that weather well, such as cedar, are encouraged wherever possible and are preferred over materials that must be painted.
- Where painted trim exists around windows, doors and exterior architectural woodwork, trim color shall be appropriate to façade color or be left natural.
- New windows shall be white in color or natural/protected wood finish, except in cases of limited replacement where windows shall match color of existing fenestration. Vinyl clad windows are allowed.
- Roofing material color and trim shall harmonize with the materials and colors of the walls and major elements of the building. Clashing colors shall be avoided.
- On concrete block buildings, murals will be considered on a case-by-case basis and designs must be submitted for review.

## **Roofing**

- Roofing should consist of materials commonly found in New England. Asphalt or wooden shingles shall be used on pitched roofs.
- Mechanical equipment shall not be located on roof tops, except for building-integrated photovoltaic panels, solar hot water panels, special ventilation systems, and related types of equipment.

## **Building Massing and Roof Height**

- Single-story buildings shall remain as single-story buildings.
- Where roofs are reconstructed, respecting Town of Truro bylaws, the height limit for buildings shall be two stories and 23 feet in height where roofs are flat. Buildings with a gable roof shall not exceed 30 feet in height measured to the highest point of the roof.
- Clerestories and skylights are permitted. These features are encouraged where interior light is critical to building operations such as clerestories for artist work space to add daylighting.

## **Windows, Doors, and Openings**

- Clear, colorless glass shall be used for all windows and doors. Mirrored or colored glass may not be used at the Highlands Center unless they have a specific purpose.
- Fixed and operable windows can be used. Fixed windows are best used in combination with operable windows, such as fixed over operable combinations or vice-versa. Casement, awning, sliding, and double-hung windows shall be allowed; please see sub-area guidelines for specific window guidelines.
- Existing openings may be reused wherever practical to reduce the need for structural modifications. Reducing the total area of window and door openings is discouraged because it will detract from the transparency of buildings. Enlargement of existing window openings is allowed. Windows and doors allowing passersby to view activities and programs promote a cohesive community feeling to the Highlands Center.
- New openings may be needed because of interior wall modifications or the need for additional light. The placement of new openings shall honor the existing patterns and proportions of window and door openings. This is meant to prevent the creation of undersized or oversized windows out of character with the building.
- Protruding bay windows are not allowed.
- New windows may be constructed of wood, vinyl or aluminum clad, or “plastic” wood composite materials.
- No temporary awnings or canopies shall be erected on the building.
- Awnings are allowed at building entry points and shall be constructed of permanent materials that match existing building materials or may consist of prefabricated fabric canopies. In either case, awning design must be submitted with building plans.

## **Walkways and Ramps**

- Walkways and accessible ramps may be constructed of paving materials (asphalt or small aggregate paving gravel) if there is a slight slope over a relatively short distance. Longer runs and steeper slope ramps shall be constructed of wood decking or recycled “wood-like” composite materials. It is desirable that ramps throughout the site share consistent design elements in the form of handrail design and materials and ramp base materials wherever possible.

## **Exterior Railings**

- Exterior railings and related ornamentation shall be designed and constructed as integral parts of the building.
- Preferred materials for railings and porch walls are open-design wood and metal designs. Solid railing walls are because they block views and create barrier-like conditions.
- All railings, handrails, posts and other elements shall be left natural or painted/stained in neutral colors coordinated with building trim colors.

## Equipment Screens, Utilities, and Exterior Equipment Locations

- It is a goal that wherever possible, utility lines should be placed underground over time.
- The exterior location of mechanical equipment and garbage areas shall be away from the front of buildings, remote from public gathering spaces, and out of sight of major building views to the extent practical. It is recognized that some building programs, such as labs, require additional HVAC equipment – it is requested that the best effort is made to locate equipment with sensitivity to the entrances of buildings and the public use of exterior spaces.
- Exterior mechanical equipment areas (for air conditioning, heating, etc.) and trash cans shall be screened from view.
- Preferred screening is with the use of landscaping materials such as tall shrubs. If architectural screening is used, the following guidelines apply:
- Screening design may be required to allow fresh air flow through enclosure. The use of a vertical or horizontal louvers or lattice-work type design is encouraged to achieve this goal. Structural framing and clapboards are also acceptable. Stockade fencing is the least preferred alternative and may be used for small enclosures only (not to exceed 8-12 total linear feet).
- Screening shall not block window or door openings or views from or into buildings. Screens shall completely cover equipment and trash receptacles.

## Storage Sheds

Use of existing storage sheds in various locations on the site is preferred to new ones. The installation or construction of storage sheds will need to be carefully considered in an effort to keep the landscape feeling uncluttered and open.

## Additions and New Construction

It is the intention of the NPS that buildings remain fundamentally similar architecturally with modest aesthetic and functional changes. Construction of new buildings is not permissible except in very limited circumstances in accordance with 36 CFR Part 18 if permissible by the NPS and identified under the terms of a lease.

Examples of new construction that NPS or partners may undertake on site include uses such as a bus shelter, greenhouse, amphitheater, wind turbine, and wastewater plant. New facilities that are unique needs may be considered especially if they serve site-wide needs, such as a wind tower or a central wastewater plant. Siting shall be considered in relationship to the neighboring uses and impact on views and functional links.

Building Entryways: Small entryways or covered porches may be constructed in some instances if permissible under the lease and approved by the NPS. These entryways shall match or complement existing building characteristics regarding materials, detailing, and colors. Roof slopes should match the slope of the existing building, where possible.

## C. Gateway Guidelines

### Buildings: T5, 6 and 7

The gateway is located at the entrance to the Highlands Center on the western edge of the property adjacent to the core program area of the site. This area sets the first impression for a visitor to the Highlands Center and sets the tone for the visitor experience. Two of the three structures in this area are used as the water treatment plant. The third building, T5, faces the entrance road and gate. Together, the buildings “face away” from the quadrangle and feel apart from other areas of the site. This area may also host a bus shelter possibly to be constructed or provided through a grant source or possible federal funds as a result of a collaboration of the Regional Transit Authority Outer Cape transportation planning group, the Cape Cod Commission, local towns, and the NPS.



### Design Goals for Gateway Area:

- Set the tone for the visitor experience
- Provide an entry that provides the visitor with an immediate sense of place
- Create a bold impact that exudes energy with the use of architectural and site treatments, e.g. sculpture and plantings
- Use vernacular elements of cape architecture while encouraging creativity in design

## Roof Pitch

- The gateway area contains a building with a pitched roof and also contains buildings with flat roofs. Where pitched roofs exist, retaining pitched roof forms is encouraged, in keeping with traditional New England and Cape Cod architecture. Gable and shed roofs are preferred.
- Pitches up to 12/12 may be allowed in this area (12 inch rise for every 12 inches of run). Multiple roof planes of the same pitch are encouraged; however, roof planes of different pitches should be minimized.
- All new pitched roofs should have appropriate overhangs or a minimum of 18 inches.

## Equipment Screens and Exterior Equipment Locations

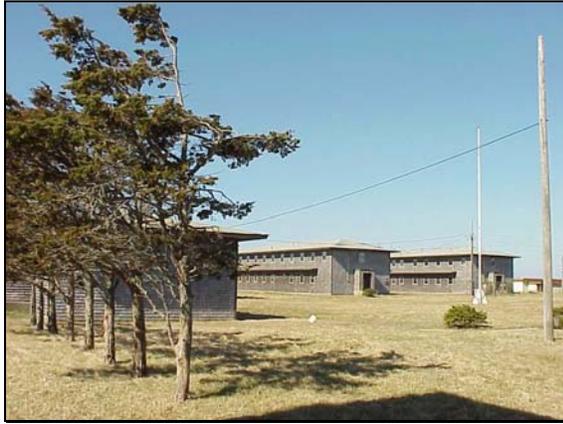
- Screened areas should be at the rear of the building, facing the water treatment plant.

## D. Quadrangle Guidelines

Buildings: 9, 10, 11, 12, 14, 16, 17, 18,19, 22 and 23

The program core area generally radiates out from the central quadrangle, providing a more insulated and intimate campus setting for program activities. The quadrangle, or quad, as it is known, is a unique grouping of wood-framed shingle-sided buildings. Mostly similar in size and style, these buildings form a strong edge around a rectangular outdoor space. A flagpole is in this area. The strong formal relationship of the buildings and regular walkway pattern around the outdoor space make for a cohesive and harmonious space. One outside edge of the quad forms the edge of the main entrance road through the site.





### Design Goals for Quadrangle:

- Maintain a community feeling linking shared outdoor spaces to the buildings.
- Maintain cohesive quality of space in terms of building height, roof pitch, and exterior details
- Maintain identity of quadrangle as a campus-like core space on the site
- Provide a strong edge along the main vehicular/pedestrian road (Old Dewline Road)

### **Roof Pitch**

- NPS does not recommend that changes be made to existing roof pitches in the quadrangle area due to the existing uniformity of building massing, although exceptions may be considered, particularly for renewable energy improvements.
- Dormers and clerestories may be added where construction of these does not add to building height.

### **Building Massing**

- Balconies may be added at the second floor of buildings 9, 10, 11 and 12. Balconies shall not extend a distance greater than 4'-0" from the face of the building and shall only be allowed at the east and west ends of the buildings and any long side not facing other buildings. Balconies shall be constructed of wood with trim to match building. Balconies may or may not be covered and balcony enclosure shall be an open railing and post system with a minimum of 60% void space to maintain the perception of openness and to minimize the appearance of bulk on the building façade.

### **Windows**

- Windows in buildings 9, 10, 11, and 12 shall continue to be double hung or be similar to the first building rehabilitated in that cluster.

## Additions

- The size and placement of buildings on the quadrangle may allow NPS to approve small connector additions or breezeways linking two buildings, subject to the requirements of Part 18. Buildings that may be suitable for connection include the following pairs: Buildings 10 and 11, Buildings 14 and 17.
- In no circumstances may more than two buildings in a row be linked by a connector addition because the pedestrian flow into the quadrangle open space and movement between areas of the Highlands Center site is important.
- Connectors that may be approved shall be constructed as one-story additions only. The exterior materials, windows and doors, and trim must be compatible with the adjacent buildings.
- The roof slope of any approved connectors should equal the slope of the adjacent buildings, where possible.
- Any approved connectors shall have exterior walls with a minimum of 50% transparent surface (windows and doors) to allow light and partial views to penetrate the structure. The intent is to preserve the open feeling between buildings and maintain visual continuity.

## Equipment Screens and Exterior Equipment Locations

- Screened areas should be located away from the central courtyard because of aesthetic concerns and the potential for increased mechanical noise that will detract from using this area for public gatherings. Screened areas should be at the west of buildings 9, 10, 11 and 12; and on the west or south side of building 16, wherever practical. If outdoor mechanical equipment is located at building 18, an attempt should be made to place it on the east side of the building in an inside corner. Buildings 16 and 17 should have any outdoor mechanical/trash areas at the east and west ends of the structures. Buildings exposed to public paths and uses on all sides should receive particular attention to visually attractive equipment locations. Blocking site lines and views should be avoided.

## E. North Side Guidelines

Buildings: 15, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, and 47

The North Side area is composed of a variety of building types and sizes. Buildings range in size from the 6500 square foot former power plant (bldg 31) to the 2000 square foot former two-lane bowling alley. The North Side of the site is primarily limited to site parking and operational activities associated with managing the facility and the national seashore, with some uses relating to the central program core area.

The buildings in this area represent a mix of concrete block and wood-framed structures. The varied size and use of these buildings makes it difficult to find overall patterns of window/door

proportion, style and roof pitch. The uses here will include site parking, NPS maintenance, and other operational activities for the Highlands Center, and some buildings for programmatic activities. The southern edge of this area forms the edge of the main entrance road through the site and the last two or three buildings on the eastern end of this road help form a strong terminus to this axis.



Design Goals for the North Side:

- Provide a strong edge along main vehicular/pedestrian axis, where possible
- Provide a strong terminus to the main site access road, e.g. sculpture or other focal point
- Encourage creativity and innovation in unique building types

**Roof Pitch**

- This part of the site contains a combination of flat-roof and pitched-roof buildings. It is the intent of these guidelines to encourage this variation in roof forms and pitches.

Where pitched roofs exist, retaining pitched roof forms is encouraged, in keeping with traditional New England and Cape Cod architecture. Gable and shed roofs are preferred.

- Pitches up to 12/12 may be allowed in this area (12 inch rise for every 12 inches of run). Multiple roof planes of the same pitch are encouraged; however, roof planes of different pitches should be minimized.
- All new pitched roofs should have appropriate overhangs of a minimum of 18 inches.
- Mechanical equipment shall not be located on roof tops, except for building-integrated photovoltaic panels and related types of equipment.

In rare exceptions, minor additions may be allowed where these additions are necessary for programmatic needs, in accordance with the NPS leasing regulations (36 CFR Part 18).

#### Building Entry ways:

- Small entryways or covered porches may be constructed in some instances, primarily to provide ADA compliant building access and shelter from precipitation.
- These entries shall match or complement existing building characteristics regarding materials, detailing, and colors. Roof slopes should match the slope of the existing building, where possible. A new entry porch shall not be proposed to extend a distance greater than seven feet from the existing building.

#### Mechanical and Programmatic Space:

- In some cases, building configuration or size may necessitate small additions to accommodate ADA requirements, mechanical equipment, restroom facilities or other such space such as an area for a kiln. Additions shall match or complement existing building characteristics regarding materials, detailing, and colors. Roof slopes should match the slope of the existing building, where possible. The size and proportion of additions shall be reviewed on a case-by-case basis.

#### **Equipment Screens, Specialized Equipment and Exterior Equipment Locations**

- Mechanical areas should be located away from the main access road façades of buildings 15, 31, 33, 34, 37, 38 and 39. On buildings 32, 35, 36 and 49 the north side of the structures is the preferred location for equipment and trash areas.
- Specialized equipment may include workspace adjunct to potential interior artist workshop uses, such as a kiln installation.

## F. Housing Guidelines

Buildings: 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217 and 218

This homogenous area of one-story houses will be separated from the main program core by a community open space once some existing buildings have been demolished (the 100-series residential buildings). In addition, if not used, the 200-series houses may also be demolished in the future.

The single-family buildings have a character unique to the site. The close clustering of the 200-series houses around a small road system establishes that this portion of the site should remain a cohesive element set apart from the rest of the campus and indicating a more private use here. The houses can be reconfigured for suite-type accommodations, single room occupancy or duplex use.



### Design Goals for the Housing Area:

- Maintain a cohesive feeling of this portion of site
- Create a passive community open space activity area

### **Roof Pitch**

- Roof pitches in the housing area shall remain relatively the same to maintain the overall character of the area.

### **Additions:**

- Additions are not permitted.

## Equipment Screens and Exterior Equipment Locations

- Equipment areas shall be located away from the house entries and shall be located in side or rear yards where possible.

## G. Outdoor Experience Guidelines

The outdoor experience area includes the open space areas throughout the site. Facilities in these areas may be provided by the NPS, the Management Partner, and/or Program Partners. The natural areas southeast of the core area are intended to provide an array of outdoor experiences and opportunities, including an:

- Experiential trail
- Coastal Science Observation Site
- Potential primitive campsite for program participants
- Potential outdoor amphitheater
- Overlook to North Atlantic Ocean
- Woodlands and heathlands
- Gathering areas, e.g. picnic areas
- Transitions between activity areas
- Recreation activity areas such as ball fields and tennis courts



### Design Goals for Outdoor Experience Areas:

- Allow for outdoor enjoyment while protecting the natural landscape
- Link design elements in open space and recreation areas, the overlook and signage to design elements in building areas, wherever possible

- Facilitate field observations for educational and research programs
- Bring more of the natural landscape elements through the entire site
- Create and maintain outdoor activity areas that provide variety and separation while maintaining links between areas

## **Walkways**

- Walking paths in the public areas may be constructed of gravel and/or wood or recycled wood-type lumber. Care shall be taken when using wood or recycled “lumber” to avoid surfaces that may become slippery when wet. A non-slip surface in the form of paint or tape shall be applied to paths and ramps as needed to provide adequate traction in dry and wet conditions.
- Stone dust and finer native stone gravel may be used on walkways and pathways. Pathway materials must meet ADA requirements.
- Existing asphalt paths may remain and new asphalt paths and walkways should be used where needed for consistency to connect with existing pathways.

## **Patios**

Patios adjacent to buildings will be allowed in outdoor areas as specified within the permitted premises that will be defined within the specific partner leases. A larger patio is envisioned at the former dining hall, Building 18, which is intended to be an eatery and meeting place. Patios shall be ADA compliant. Patios shall be constructed adjacent to but out of the direct path of circulation on the site.

- Patios may be surfaced with natural paving stones, native stone, stone dust/stabilizer, brick, or pea gravel. Artistic alternatives will be considered.

## **Potential Amphitheater and Workgroup Campsite Area**

Conceptual ideas for a potential amphitheater and workgroup campsite were captured in the Landscape Site Plan for the Highlands Center. Additional environmental and historic resource compliance would be needed.

- The design of a potential amphitheater area on the site will be guided by a program partner proposal or a collaborative effort of partners and the NPS.
- The location of an amphitheater and potential overnight camp area, if constructed, will be determined in the future based on close proximity of kettle holes and a wellhead protection zone.
- A modest size group camping area for work group program participants may also be considered with tent sites for up to 20 people, if needed to support volunteer or other program requirements.

- A cooking and picnic shelter and shared restroom serving the potential amphitheater and campsite area could be considered.
- Suggestions for the design of an amphitheater include the use of grass-covered steps, the installation of wood benches, or the construction of natural stone paving or stone dust steps. Grass should be considered for the flat area. Particular attention should be paid to acoustics when selecting materials for paving and seating areas.

### **Overlooks**

- New overlooks should be designed to match or complement the design, materials, and detailing of the overlook existing at the northern end of the Highlands Center site.

### **Coastal Science Observation Area**

- This area is the site of a low-profile, portable, bluff-top structure dedicated to visual monitoring and remote sensing of geologic, oceanographic and marine biological phenomena. A small shingled shed customary to the area has been constructed.

---

## 4 SITE AND SIGN DESIGN GUIDELINES

---

The goal of the Site Design Guidelines is to support the *2002 Landscape Site Plan* and other stated Highlands Center goals. The *Landscape Site Plan* provides a site rehabilitation proposal that establishes an essence for the Highlands Center reflective of the overall goals to make the site available for scientific research, environmental awareness, cultural and artistic expression and contemplation. This plan focuses on adaptive reuse of existing developed or disturbed areas in a way that begins to exude the envisioned character of the Highlands Center, yet allows future ideas and concepts to be developed to help the Center flourish, thereby enriching and sustaining the Cape Cod community.

### A. Planting Modifications

Vegetative modifications made to the natural landscape of the Highlands Center will be modest due to the NPS desire to maintain the ecological character of its parks and to be consistent with park regulations and policies and other national seashore areas. More extensive vegetative modifications would be expected in more developed areas. Partners or tenants shall not attach or install any items, including but not limited to fencing, signs, dog chains, swings, or other play equipment, on any Highlands Center trees or shrubs.

Partners may undertake landscape modification, new installation or ground-disturbing activity within leased or permitted premises only with the prior written approval of the NPS. This includes removal of any existing vegetation (trees, shrubs, and groundcover) on the leased or permitted premises.

#### **Plantings:**

Partners and tenants may plant new native trees, shrubs, or groundcover but must first obtain written approval of a planting plan by the NPS. Planting new trees and shrubs may be approved in locations where they will have a positive impact on the visual or ecological character of the Highlands Center. In particular, foundation plantings will be allowed in all areas. In other areas, plantings of new trees and shrubs will be reviewed to ensure ocean views are not blocked and site character is not compromised. The creation of new lawns or gardens may be permitted in the developed areas. Listed in the Appendix B are native, non-invasive species that may be considered for plantings on the grounds of the Highlands Center.

Contained gardens, where small-scale vegetable and annual or flower gardens are planted in removable tubs or pots, are permitted along with hanging plants and planters. Any non-native plants need prior approval by the NPS. Partners and tenants must submit contained garden plans with a complete proposed plant list to the NPS for prior written approval before beginning work.

The purpose of the planting plan review is to check for invasive exotic or non-native species for compliance with nationwide NPS management policies.

### **Partner Landscape Maintenance Requirements**

Partners and tenants shall regularly cut, prune, and weed plantings and planting beds on leased property to maintain a tidy and professional visual character at the Highlands Center and to prevent plantings from intruding on walkways, entrances, and windows. Partners shall perform pruning of foundation plantings and maintenance in their assigned areas.

Other than the lawn on the main quadrangle, native groundcover will be favored over sod or seeded grass lawns. Lawns surrounding the main quadrangle area may be watered on a regular basis to keep them green and healthy looking. Lawns in common areas will be maintained by the NPS, the Management Partner, or a contractor. Lawns are to be mowed at a frequency so that the grass does not grow taller than three to six inches above the soil in developed areas. Edging shall be trimmed to keep sidewalks, driveways, and patios clear. Flowerbeds shall be cleared of weeds, grass, and dead plants on a regular basis.

## **B. Utility/Service Treatments**

Utilities and services at the Highlands Center consist of electrical and mechanical infrastructure systems that allow the buildings and grounds to function efficiently and properly. The aim of the NPS is to promote environmentally friendly water and energy utilities and services. An environmentally friendly approach to utilities and services shall be implemented to the extent possible.

### **Irrigation**

The main quadrangle will contain the only sod or seeded grass lawn in the Highlands Center. If Partners or tenants choose to have plantings in approved areas on their leased property, acceptable irrigation systems include above ground sprinklers and soaker hoses only. Above ground irrigation systems will be sufficient to establish and maintain new and approved plantings. In order to conserve water, preserve the natural vegetation, and minimize excavation, Partners shall not install any in-ground irrigation systems.

### **Backflow Preventors**

Backflow preventors exist to provide a point of stoppage on a water line to prevent contamination of water supply lines, and must be installed on all outdoor water systems. The placement of these devices must be identified on rehabilitation and construction drawings, including site and HVAC drawings.

## **Mechanical and Utility Equipment**

Determining inconspicuous placement and balancing form and function is part of the design challenge in the Highlands Center’s redevelopment phase. Mechanical equipment including, but not limited to – backflow preventors, generators, transformers, air conditioning and heating units, chillers, natural gas, oil tanks, electric service panels, antennas, satellite dishes, conduit, plumbing, or other utility lines – are to be as inconspicuously placed as possible. When practical, equipment should be placed away from walkways, building entrances, and outdoor seating and gathering areas to minimize visual and audible impacts on the site and users. When appropriate, screens shall be used to mitigate the visual impact of mechanical equipment and utility lines. Options for screening mechanical equipment include natural plantings and fencing/building materials. Natural plantings are more desirable than synthetic materials because they blend easily with the landscape, making the Highlands Center grounds more aesthetically pleasing. Proposed plans for the installation of any mechanical equipment and screens must be submitted for review and approval, where permissible under the terms of the lease. The design guidelines for equipment screens and windbreaks can be found in the Architectural Design Guidelines section of this Handbook.

## **Site Drainage and Grading**

Construction or any other site improvements as a part of the rehabilitation process can impact site drainage and grading of grounds. The Partner should properly address drainage and grading in site plan submissions to maximize on-site use possibilities and avoid causing future problems with soil erosion, standing water, or adverse environmental impacts.

## **Waste and Recycling Facilities**

Decentralized and centralized options for waste and recycling facilities in a suitable area at the Highlands Center may be considered. The intent for waste and recycling facilities is that a consistent approach to facilities is developed and that waste and recycling areas are designed in a neat and orderly manner. Partners are responsible and must manage all types of waste in accordance with applicable local, state and federal regulations.

## **C. Parking, Loading and Circulation**

The general concept for parking, loading, and circulation at the Highlands Center is one of unimpeded flow. The Highlands Center’s aim shall be to provide a logical and integrated system throughout the site to facilitate pedestrian traffic flow to all facilities and site opportunities.

### **Circulation**

South Highland Road and Old Dewline Road will provide the main vehicular access to the Highlands Center. Public parking will primarily be in designated satellite lots. Parking for disabled will be provided at the most suitable dispersed locations nearest facilities, in

compliance with Americans with Disabilities Act requirements. Short-term drop off areas for deliveries are allowed.

## **Parking**

Most parking will be public. Limited, designated Partner employee and guest parking may be permitted within the program area of the Highlands Center if identified in a lease.

Accessible parking for the disabled, whether provided and maintained by the NPS or a partner, is required. Specific guidelines for the type, size, and accessibility requirements of handicapped accessible parking are provided by the Americans with Disabilities Act (ADA) office at their website, <http://www.ada.gov>. Note that ADA requirements for accessible spaces may vary due to the specific use of the adjacent building. Factors to keep in mind regarding handicapped parking: conventional (car) handicap-accessible spaces should be 13'0" wide (8'0" with a marked adjacent access aisle of 5'0"). Van accessible spaces are to be 16'-0" wide with the adjustment being an 8'0" aisle. One in every eight spaces is required to be van accessible. A rule of thumb for parking requires one handicapped accessible space per 25 cars.

## **Paving and Accessible Routes**

An entire path from parking space to building entry must accommodate a wheelchair, so it is best to locate them as close as possible to an accessible building entrance. The Americans with Disabilities Act (ADA) also mandates that entrance ramps be constructed on any public buildings whose entrances are above sidewalk level. While some of the Highlands Center building entries are already handicap-accessible, some are elevated above grade and have entry steps. ADA compliant ramps that compensate for this will require thoughtful design, and specific guidelines and technical help are provided at the ADA website. For consistency at the site, a few standard types of ramps will be approved; the design and materials of ramp elements such as railings and handrails shall be similar wherever possible.

Though an ADA compliant entrance through the front door of a building is preferred, it will not be possible for every building. Ramps should be coordinated to the greatest degree possible with the location of the "on-site" accessible parking, and some accessible routes may be easily located near the rear of some buildings. Building and landscape form and features shall be considered in the design and retained to the highest degree possible. Partners doing outdoor programming will need to be mindful of providing accessible routes to the event locations.

Existing sidewalks will be retained in every practical and feasible case. New paving may be required to provide accessible routes for wheelchairs according to ADA guidelines. Paving accessible routes will generally consist of two materials – asphalt and stone dust – in order to meet ADA compliance. Asphalt will be used in repaving and repair of existing main paved thoroughfares and sidewalks. Stone dust or an approved equal will be used to create new accessible routes, i.e. between parking lots and program or residence areas. Coarse gravel may not be used because it does not provide a stable base for wheelchair travel.

## **Alternative Transportation**

The Cape Cod National Seashore and Outer Cape towns' trolley operated by the Cape Cod Regional Transit Authority is expected to eventually include an on-demand Highlands Center stop during the summer months. This trolley would allow public access to the site via mass transit and would help reduce the amount of automobile traffic coming into the Highlands Center. A single bus stop is anticipated, and a bus shelter is proposed.

Partners will be encouraged to provide van service for air and other bus travel connections. Transportation fleet options for partners could include alternative fuel vehicles or small trams, or even golf carts for travel between parking lots and program areas. Since the Highlands Center is a conveniently sized campus, walking and bicycles should also be encouraged as ecologically friendly means of alternative transport for Partners' employees and visitors alike.

## **Loading Areas**

Loading and unloading zones will be confined to areas that have the least amount of visual and circulation impact on the program and residence areas of the Highlands Center. If loading must be done on a main thoroughfare, it should be done in a timely manner so as not to negatively affect the experience of visitors to and staff at the Highlands Center. Should a Partner use part of a building for a loading dock or bay, they will designate the area as such, and provide adequate clearance for large vehicles. Such proposals, including sign location, sign text and duration of parking allowed, must be included on proposed plans.

Overnight and express mail deliveries should be directed to use empty parking spaces (rather than block roadways) within the program and residence areas of the Highlands Center.

## **D. Open Space Connections**

Open space connections at the Highlands Center provide the equivalent of outdoor "hallways" – connecting outdoor gathering spaces and buildings and connecting to walking paths. These open space connections may also provide links to scenic views. Open space connections, if approved by NPS, will facilitate the movement of pedestrians toward functions (programmatic activities) and accentuate and take advantage of the natural beauty and views of the Highlands Center grounds.

## **Walking Paths**

ADA compliant walking paths and open space connections between program, residence, and activity areas at the Highlands Center, along the perimeter of the Highlands Center will generally be provided by the NPS and/or the Management Partner. Connections will direct pedestrians, bicyclists and rollerbladers to areas within the program and residential sections of the Highlands

Center. As improvements are made, bicycle and pedestrian paths will be clearly marked both on the main thoroughfares and on designated roadways. Bicyclists and pedestrians always have the right of way in vehicular traffic at the Highlands Center. Walking paths may eventually connect to other adjacent Cape Cod National Seashore open space.

Access to areas deemed dangerous or environmentally sensitive, such as the edge of the coastal bluffs, or areas used by the FAA or for the management and upkeep of the Highlands Center will be restricted or prohibited.

### **Public Access and View Corridors**

View corridors to the east shall be maintained to the degree possible. View corridors that provide vistas of the Atlantic Ocean and Cape Cod's coastal bluffs and heathlands shall not be blocked. View corridors between buildings and along roadways must also be maintained. Screens shall be used for mechanical equipment and other utilitarian purposes to reduce visual impacts that may intrude upon view corridors. Screens shall be as minimally intrusive as possible.

Windscreens, such as a small enclosure around an outdoor seating area, will also be considered to provide wind screening while preserving view corridors. Tempered glass windscreens are preferred; Plexiglas windscreens may be approved but these pose maintenance challenges. (Plexiglas yellows when exposed to ultra violet light and scratches easily.) Maintenance and periodic replacement must be a consideration when using plastic in lieu of glass.

Public access is restricted at the coastal bluffs to protect public safety at the Highlands Center. The 120-130 foot high cliffs are unstable and subject to erosion, therefore public access at the cliffs is prohibited and a stairway for beach access will not be provided.

## **E. Site Furnishings and Objects**

Site furnishings and objects on the Highlands Center grounds permitted by leases will be high quality and appealing. Highlands Center program partners may propose alternatives to exterior site furnishing and objects they would like to place on the site with review by NPS and Highlands Center, Inc. Such proposals may be reviewed by a Highlands Center Design Advisory Committee. Any ground disturbance related to installation of these furnishings must also have prior utility and archeological clearances.

### **Site Furniture/Seating**

Standardized options will be provided by the NPS for quality bench and picnic seating around the grounds of the Highlands Center. Some site furnishings and objects on the Highlands Center grounds may have already been designed or put into widespread use by the NPS. However,

artistic creativity and non-standard furnishings can be considered for functional use. Furthermore, safe, quality artist-designed furnishings will be encouraged.

In general, furniture such as benches, picnic tables, trash receptacles and other outdoor fixtures should meet the following guidelines:

- Furniture should be of quality construction. Tight joints, hidden connectors (bolts, screws, etc.), and materials that can stand the test of time and weather are strongly recommended for outdoor furniture.
- Furniture should be well-scaled for the human figure. Benches should allow ample depth for comfortable seating. When provided, bench backs should be high enough to avoid cutting into the mid-back area.
- Sustainable materials should be used whenever possible. These materials include recycled “lumber,” and sustainable woods.
- Benches and other furniture constructed of woods such as cedar or teak (certified from sustainable forests) will weather naturally and are preferred to materials that must be painted regularly.
- Accessibility should be considered.

### **Temporary Art Installations**

Temporary art installations on the grounds of the Highlands Center may be approved after design review by a committee designated by the NPS and HCI. This committee will be composed of park employees and representatives of partner groups, along with designated artists. All art on public display, whether personal or related to a festival or gathering must be approved prior to its installation or erection, and a time frame and written agreement for such placement and display will be developed. In general, art will be considered temporary if it is in place in a public location for six months or less.

### **Semi-Permanent Art Installations**

Semi-permanent art installations on the grounds of the Highlands Center may be approved by NPS after design review by a committee designated by the NPS and HCI. Because of the subjective nature of art-related installations and their review, specific guidelines have not been written. However, it is intended that semi-permanent art installations must be approved prior to installation or erection, and a time frame and written agreement for such placement and display will be developed in collaboration with the Partners and approved by NPS.

### **Picnic, Recreation, and Break Areas**

Centralized locations for common picnic, recreation and break area facilities around the grounds of the Highlands Center will be considered. A few specific areas, such as the existing picnic grove, will be designated for employee breaks, visitor picnicking and special event use.

Installation of temporary and portable recreation equipment may be permitted subject to approval, and placement and use of such equipment will avoid damage to existing vegetation and landscape features.

### **Bike Racks**

Partners may pursue design options and determine appropriate locations for bike racks in collaboration with the NPS. It is desired that bike racks be located in areas that facilitate common use by all site visitors since the Highlands Center encourages alternative forms of transportation for the betterment of the Cape Cod environment.

### **Exterior and Site Specific Lighting**

Partners will investigate design options and determine appropriate solutions for low-level options for exterior and site specific lighting in collaboration with the NPS. Low-level exterior and site-specific lighting will be used in order to preserve the visibility of the night sky on the Outer Cape. Lighting shall be designed with pedestrian safety in mind, which will help guide the wattage, type, and placement of lights.

Up lights, bright spot lights and other lighting schemes that detract from the environment, intrude on the “natural dark,” or create glare spots on the site are not permitted. Lighting powered by photovoltaic cells is strongly encouraged.

### **Fencing**

Split rail and stockade fences are allowed at the Highlands Center. In no case shall fencing disturb public view corridors to the water. If alternative fence types are desired, Partners will consider equipment screening options previously described when determining appropriate solutions for other typical Cape Cod vernacular types of fencing in collaboration with the NPS.

### **Windbreaks**

Windbreaks are important visual attributes of the Highlands Center plan. They may be used by Partners to mitigate the effects of wind on the site and may be used to create wind buffers at outdoor eating and sitting areas. They must be planned and designed to be reflective of and compatible with the visual character of the Highlands Center, but they must also be functionally sound and resistant to the action of seashore environmental elements. Windbreaks can consist of native trees and shrubs in cases where view corridors are not blocked, tempered glass, or as a least desirable option, synthetic materials such as Plexiglas where views are important. All windbreak material must be environmentally friendly and the use of recycled materials is encouraged.

## F. Sign Design Guidelines

Individually and cumulatively, signs have a significant visual effect on the character of the Highlands Center. Partners may collaborate with the NPS to identify all signage needs, develop a sign plan, and establish hierarchy, consistency and critical locations for various sign types, as needed throughout the Highlands Center grounds.

The intent of signage guidelines is to provide a signage design plan and establish a hierarchy, consistency and standard for all signs at the Highlands Center. These signage design guidelines will need to meet the standards of the Town of Truro Sign Code as outlined in the Truro Zoning By-law.

These guidelines cover both temporary and permanent signage on the site. Signage at the site falls into two general categories: standard NPS signage and non-standard Partner/event signage:

### Partner/Event Signage:

- Building/partner identification signs
- Event signage
- Directional signs
- Entrance signs

### Standard NPS Signage:

- Interpretive signs
- Trail signage
- Regulatory signs

The signage design guidelines apply to all Highlands Center Partners, tenants, and other entities using the facilities. The following signs are outside the scope of these guidelines:

- Signs and sign systems used in the interior of buildings, where these signs are not visible from the exterior.
- Temporary or permanent signs to warn of danger or hazardous conditions, including signs indicating the presence of underground cables, gas lines, hazardous natural features, and similar situations.
- Signs displayed on motor vehicles or trailers that are being operated or stored in the normal course of business, such as signs indicating the name of the owner or business, which are located on delivery trucks, rental trucks, moving vans, and the like, provided that the primary use of such vehicles is not for the display of signs, and provided that the vehicles are parked or stored in areas appropriated to their use as vehicles.

## **Review and Approval Process for Signs**

National Park Service and Highlands Center, Inc. will work collaboratively to determine a process for review and approval for all signs at the site. These guidelines may address issues such as sign sizes, materials, content, location, event signage, and other related issues that are deemed appropriate.

### **General Guidelines for All Signs**

- There shall be no commercial advertising or use of brand names on signage.
- There shall be no permanent or temporary signs in windows or door glass or exterior surfaces of buildings and entries.
- Temporary signs for events may indicate sponsors only in accordance with NPS Director's Order #21: Donations and Fundraising.
- Signs with visible moving, revolving, or rotating parts are discouraged.
- The use of flashing, moving, rotating, or blinking lights is prohibited.
- Internal sign illumination is prohibited.
- The use of beacons or searchlights for special events or advertising purposes is prohibited.
- All signs must be maintained in good repair and free of marks and graffiti.
- Murals are permitted only upon review and approval.
- NPS standard regulations will apply or will be designated by the NPS for the following types of signs: Interpretive signs, trail signage, and regulatory signs.

---

## 6 REFERENCE LIST

---

Many of the documents listed below are referenced in this handbook and are available for review at the following location:

Cape Cod National Seashore Headquarters

99 Marconi Site Road

Wellfleet, MA 02667

### References

2003 *Request for Proposals for Program Partners and Request for Qualifications for a Management Partner*, NPS.

2003 *Management Plan and Environmental Assessment for Invasive Exotic Plant Species Control at Cape Cod National Seashore*, NPS.

2003 *Integrated Pest Management Plan for Cape Cod National Seashore*, NPS.

2002 "Landscape Site Plan Report," Prepared by Patricia Quintero Brouillette, NPS Landscape Architect, Boston, MA.

2001 "A Review of the Radio Frequency/Microwave Exposure at the Former North Truro Air Force Station," Prepared by James B. Robertson, Ph.D., NC.

2001 Building Rehabilitation and Demolition Analysis, Bargmann Hendrie + Archetype Title 1 Facilities Planning Study for the NPS, Boston, MA.

2000 Building Condition Assessment, Bargmann Hendrie + Archetype Title 1 Facilities Planning Study for the NPS, Boston, MA.

2000 *Renewable Energy Opportunity Assessments for CCNS Highlands Center*, Prepared by Architectural Energy Corporation for the Federal Energy Management Program and National Renewable Energy Laboratory, Boulder, CO.

1999 *Site Plan and Environmental Assessment for the Former North Truro Air Force Station*, NPS Cape Cod National Seashore, Wellfleet, MA.

2001 *Atlantic Learning Center Sustainability Guidelines* by Architectural Energy Corporation for the National Renewable Energy Corporation, Boulder, CO.

1994 *Designing the Future to Honor the Past, Design Guidelines for Cape Cod*, Cape Cod Commission and Community Vision, Inc. in cooperation with UMass Amherst Center for Rural Massachusetts, MA.

1990 *Botanical Survey of North Truro Air Force Station Cape Cod Barnstable County, MA*, Prepared by Henry W. Art, Ph.D. for the Cape Cod National Seashore, NPS, North Atlantic Region.

*Americans with Disabilities Act*

*Town of Truro Zoning Bylaws*

Other useful references:

High Performance Building Guidelines – Sustainable Design and Construction

1993 *Guiding Principles of Sustainable Design*, NPS, Denver Service Center, Denver, CO.

LEED Point-based Design Guidelines, US Green Building Council

Northeast Energy Efficiency Partnership

Massachusetts Technology Collaborative – Best Practices Manual

US DOE Guidelines, National Best Practices Manual and Energy Design Guidelines

Sustainable Design and Construction Refunds and Incentives

Cape Light Compact website: <http://www.capelightcompact.org/>

---

## **7 ACKNOWLEDGEMENTS**

---

### **Authors/Contributors**

#### **Cape Cod National Seashore (CCNS)**

Lauren McKean, NPS Highlands Center Project Manager

#### **Consultants**

Susan Crowl Silberberg, Community Partners Consultants, Inc.

Adele Fleet Bacow, Community Partners Consultants, Inc.

Lars Hanslin

#### **Barnstable County's AmeriCorps – Cape Cod Members**

Jamey Bergman, Year IV

Juna Hickner, Year V

Christopher Hawkins, Year VI

### **Reviewers**

#### **Partners**

Highlands Center, Inc. staff and the Real Estate Committee, and their architectural consultant, David Perry Studios, reviewed and commented on this handbook.

Highlands Center Program Partners also reviewed and commented on this handbook, including the Fine Arts Work Center, Payomet Performing Arts, and Barnstable County's AmeriCorps Cape Cod.

#### **National Park Service (NPS)**

David Hollenberg, Associate Regional Director, Design, Construction and Facility Management, NPS Northeast Region

CCNS Superintendent and Department Heads also served as technical reviewers.

**Some information in this Handbook has been incorporated into the Highlands Center guidelines from the following work:**

2004 Native Plant List, Stephen M. Smith, Ph.D., Plant Ecologist, Cape Cod National Seashore, National Park Service (NPS).

*2002 Landscape Site Plan Report, Highlands Center at Cape Cod National Seashore* by Patricia Quintero Brouillette, Landscape Architect, NPS.

*2002 Golden Gate Project Handbook and Technical Appendices*, NPS.

*2002 Parkwide Site Furnishings Standards*, Golden Gate National Recreation Area, San Francisco, CA. NPS.

*2001 Atlantic Learning Center Sustainability Guidelines* by Architectural Energy Corporation, Boulder, CO. for the NPS.

1999 Fort Hancock Rehabilitation Guidelines, Prepared by Chandler McCoy, Presidio Project Office, for the Sandy Hook Unit of Gateway National Recreation Area, Sandy Hook, NJ, NPS.

**Photo and Map Credits**

Cover Illustrations by Jeff Shumacher, NPS Consultant, 2003

Page 7 Aerial Photo taken by Remote Controlled Airplane by NASA in cooperation with the NPS, 2003.

Page 8 *Landscape Site Plan*, NPS, 2002.

Page 9 Existing Conditions Map, prepared by Denver Service Center, NPS, 1998.

Pages 14, 15, 16, 20, 21 - Photos Courtesy of NPS.