

Energy Efficiency Audit of the Historic Resources Chapter of Master Plan

The ARRA Energy Efficiency Conservation Block Grant through the New Hampshire Office of Energy & Planning provided funding for this project.

In regard to energy efficiency, the audit looked at the, assessments of natural resources, historic resources, current status and needs, and recommendations contained in the 2000 Natural Resources and Historic Chapter of the Master Plan. The purpose is to provide energy efficiency recommendations to the City of Dover for use in their Sustainability Plan.

Section 1: Goals and Objectives

Same comments as in prior section on Natural Resources

Section 2: Introduction Dover's History

In New England, the historic character of communities attracts visitors and helps to sustain the economy. Historic preservation is not at odds with energy efficiency. In fact they complement each other. Preserving historic buildings values open space and character, traditional trades, and retention of materials as compared to the amount of material necessary to build a new structure. Energy efficiency is achievable in historic buildings. Careful stewardship of older homes and buildings helps to create a distinct sense of place, and learning about local history connects people to their community

... Modern technologies and weatherization procedures allow significant improvements to buildings without compromising the historic value of the structure. Older homes and municipal buildings have a reputation of being inefficient. Restoring them is usually more environmentally efficient than building new ones, especially after they are retrofitted with energy upgrades. In addition, the dense development and inherent walkability in many historic neighborhoods allow residents to be less dependent upon their vehicles – a distinct environmental advantage (Source: Clean Air Cool Planet).

Dover History

Text from the Master Plan chapter that illustrates use, reuse, renewal of resources, buildings, infrastructure, and services.

During the 1790's there appeared to be a lumber crisis as the supply of quality trees dwindled. However, Dover merchants united against the possible loss of their economic base and

constructed the first New Hampshire turnpike and other roads into the interior. These improvements in transportation provided easier access to inland timber sources, and the City maintained its economic base through this time of crisis. The disastrous years of the British embargo and War of 1812, which cut off the lucrative ocean trade, changed forever the destiny of Portsmouth which never recovered an industrial base. Although Dover was also affected by these events, the town turned again to its water resources to develop industry.

One of the agricultural resources that has survived is the Varney/Horne Homestead on Blackwater Road that was settled in 1810. In 1842 the railroad came to Dover and changed the major mode of transportation from water to rail. Dover was the hub of several railroads coming into the City. The Boston & Maine Railroad ran roughly east/west, and a later southern division spur was built from Portsmouth across Dover Point running north/south through the city on roughly the route used today by the Spaulding Turnpike.

Civic and religious structures were added to the City's building stock in the late 19th and early 20th century, including the Court House, 1890, on Second Street, and the Masonic Temple, 1907, City Hall 1935, the Public Library, 1905, and the 1891 Fieldstone Episcopal Church on the corner of Locust and Hale Streets form a "plaza" which still retains a particular turn-of-the-century character.

... the northern textile business declined. In 1909, the Pacific Mills of Lawrence, Massachusetts, took over the Cocheco Manufacturing Company and tore down the printworks in 1913. Operations slowed, and then stopped entirely in 1940. The physical plant was sold at auction to the City of Dover in 1941. During this time period, the downtown area of Dover has undergone a number of dramatic changes. From 1974 to 1978, the City undertook a huge \$9 million urban renewal project. Almost 16 acres were razed on Orchard, Waldron, Chestnut, Fayette, and Green Streets. 119 dwelling units, 56 buildings, 33 businesses (including the tannery) were knocked down to bring new life to the area.

Dover contains a diverse and historically significant set of historic resources including sites, monuments and buildings. A number of buildings and places have been placed on the National Register of Historic Places. Dover's surviving historic resources can best be understood in the context of Dover's history. Although many of Dover's historic resources survive today there have been periods when numerous structures have been razed for new development— such as during the period of Urban Renewal in the early 1970's. The challenge for the City will be grow and redevelop in a manner that is consistent with the protection and enhancement of its valuable historic resources. This following section is an update of the Historic Resources inventory conducted for the 1988 Master Plan. That inventory relied on historic research and a windshield survey to identify existing historic structures and places

By using the national standards and accreditation process for historic preservation within the City of Dover, citizens and the City may move forward several of the primary recommendations included in the 2000 Update to the Natural Resources and Historic Chapter, particularly for maintenance, operations, and capital financing.

City of Dover
Strafford Regional Planning Commission
Energy Technical Assistance & Planning for New Hampshire Communities

Section 3: Historical Resources

The following include the sites in Dover on the National Register with date of inclusion:

<u>Building/Site</u>	<u>Location</u>	<u>Date Constructed</u>	<u>Date of Inclusion</u>
Back River Farm	Bay View Rd.		6/22/84
County Farm Bridge (Site)	County Farm Rd		5/21/75
First Parish Church	218 Central Ave.	1829	3/11/82
First Parish Church Site	Dover Point Rd.	1634	5/27/83
Garrison Hill Park & Tower	Abbie Sawyer Mem Dr.	1880 (1 st) 1919 (2 nd)	9/11/87
William Hale House	5 Hale Street	1806	11/18/80
Public Market	93 Washington St.	c.1840	3/7/85
Michael Reade House	43 Main St.	1785	2/12/80
Friends Meetinghouse	141 Central Ave.	1786	2/29/80
Sawyer Building	4-6 Portland St.	1825	5/23/80
Sawyer Woolen Mills	1 Mill St.	1824	9/13/89
St. Thomas Episcopal Church	5 Hale St.	1891	6/7/84
Strafford County Farm	County Farm Rd.	1866	2/25/81
US Post Office Main	133-137 Washington St.	1909	7/17/86
Woodman Institute	182 Central Ave.		7/24/80
Damm Garrison		1674	
Woodman House		1818	
John Parker Hale House		1814	
Samuel Wyatt House	7 Church St.	1835	12/2/82

The city should identify historic buildings that are City owned and benchmark the energy usage in each. The City should work with the Local Energy Committee and the Sustainability Committee as well as historic committees and other nonprofits to identify an integrated approach to the preservation, management and marketing of Dover’s public and private historic resources and buildings.

Section 4: Historical Resources Recommendations

The energy aspect of historic resources includes:

- Move forward with energy efficiency building programs. Learn the baseline consumption levels for each building identified as City owned using programs such as EPA Portfolio manager or Peregrine web-based tool.
- Set a reduction goal for the City owned historical properties - for example: reduction of energy usage by 10% by 2015.
- Create an Action Plan and develop incentives - for example: weatherization.
- Get residents and visitors walking and biking to the historic resources for events. Develop a tour of Dover that is based on economic development over time, role of energy and resources. Work with the local historic nonprofits, volunteers, Chamber of Commerce, Main Street Program, and Rotary Club, Economic Development Committee, and Local Energy Committee, and Dover Heritage Walk Committee.
- Create a network of natural areas, parks, historic sites, and trails with citizens by creating a Green space Master Plan
- Provide a map in the Master Plan Chapter and on website showing aerial photos of each historical mark facility and location.
- Prepare a comprehensive inventory— both written and photographic— of all historic properties in the City of Dover based upon information collected and published for the Heritage Walks and other relevant documents.
- Consider adding additional roads, or road segments, to the City's scenic road inventory consistent with RSA 231.157 that have trees and/or high quality views that include historical agricultural landscapes, including stone walls.
- Use <http://myenergyplan.net/ght/virtualTour.jsp?ghtHomeId=24> as resource for residential home owners for green home tour. There are examples of historic properties that are energy efficient.
- Maintain the aesthetic integrity of the downtown and continue this aesthetic as it may be interpreted in 21st century into redevelopment of the water front area.
- Encourage buildsmart - a green building program that sets requirements and recommendations for improving energy efficiency, conserving water and resources, and reducing waste generated by new construction and additions. See Boulder County, Colorado as an example:
<http://www.bouldercounty.org/government/dept/pages/landusemain.aspx>

The BuildSmart Regulations Examples

Deconstruction: All existing structures on the property must be "deconstructed" to salvage as many materials as possible. The builders would create a deconstruction plan, which would, at a minimum, save reusable cabinets, doors, windows, flooring and fixtures as well as lumber and wood sheathing.

Reuse and recycling: Extra wood, scrap metal, cardboard and concrete from construction is recycled on site, sent to a recycling facility or donated to a building-materials exchange.

Energy efficiency: New homes would be built to meet energy-efficiency requirements established by the nationally recognized Home Energy Rating System Index. A home that meets the minimum standards of the 2004 International Energy Conservation Code scores a 100 on the "HERS Index." A net-zero energy home -- or the most efficient home possible -- gets a score of zero.

Water conservation: Water-saving fixtures such as low-flow toilets and shower heads must be used inside the house.