



# Preservation Education Skills for Building Trades Instructors | 1996-22

University of Vermont



National Park Service  
U.S. Department of the Interior

National Center for Preservation Technology and Training



# Preservation Education Skills for Building Trades Instructors

## Project Summary Report

Historic Preservation Program  
University of Vermont  
Burlington, VT 05405

October 31, 1996

Produced with grant funding from the National Park Service,  
National Center for Preservation Technology and Training

**Report to the National Center for Preservation Technology and Training For  
Preservation Skills for Building Trades Teachers Presented at the University of Vermont  
July, 1996**

Eleven teachers and administrators enrolled in a pilot course, "Preservation Skills for Building Trades Teachers" developed by the University of Vermont (UVM) with assistance from Historic Windsor's Preservation Institute. Funding for the development of the course, a resource guide, and scholarship assistance for enrollees was provided by the National Center for Preservation Technology and Training.

Principal Investigators were Professor Thomas Visser, Interim Director, UVM Historic Preservation Program and Judy L. Hayward, executive director, Historic Windsor, Inc. Russell Newton, a graduate student in the UVM program, served as project assistant.

The students gave the pilot course and resource guide excellent evaluations. See attached. Consequently, it is Prof. Visser's and Ms. Hayward's unanimous recommendation that a program of study for vocational building trades teachers be given full consideration for development and implementation at UVM. Rather than create a new degree, we recommend the creation of a cooperative venture with the UVM Historic Preservation Program and the UVM Department of Education, graduate program. The University of Vermont awards a master's degree in education. We suggest the development of a specialization in historic preservation for vocational building trades teachers. To date, no such program has been found to exist at any college or university. The development of such a program would be a first that could be replicated at other institutions in the U. S. where master's degrees in historic preservation and education are offered. Additionally, opportunities for long distance learning from a base at UVM will only increase with the rapid pace of improvements in computer, video, and satellite technology.

The program of study would lead to a master's degree in education. It will emphasize curriculum development and instructional techniques for conveying principles of practice for preservation, restoration, rehabilitation, and reconstruction to secondary students. Detailed instruction for making the connection between historic preservation skills and academic subjects such as history, math, chemistry, physics, and writing skills will be offered.

Thirty-six credit hours at the 200 level or above is the minimum requirement for a master's degree at UVM. We suggest 18 hours in historic preservation and 18 hours in education. Courses may be taken during the summer or academic year.

Please see copies of the appropriate sections of the University Catalog for detailed course descriptions. Described below is a suggested outline of the courses in which the master's degree candidate could enroll to meet the required 36 hours.

### **Required Historic Preservation Courses**

Six of the following courses would be required for the program:

HP 202 Introduction to Preservation Skills Education for Vocational Building Trades Teachers

HP 203 Conservation Techniques for Historic Preservation

HP 307 Advanced Architectural Conservation

HP 201 Architecture, Landscape, and History

HP 204 Historic Preservation: Development Economics

HP 391 or 395 or 397 Master's Thesis, Internship, Special Topics, or Special Readings or Research.

It may be possible for some of the students to achieve their requirements for HP 395 or 397 through attendance at the Preservation Institute's workshops. Enrollment in such programs would permit supervised, hands-on instruction in a variety of preservation skills.

### **Required Education Courses**

The graduate program in Education offers concentrations in curriculum and instruction and secondary education. Six of the following courses would be required for completion of the master's degree in education with a specialization in historic preservation skills education:

ED 207 Adolescent Learning from a Behavioral and Cognitive Perspective

ED 212 Child and Adolescent Psychology

ED 215 Reading in the Secondary School

ED 216 General Methods for Secondary Teachers

ED 217 Secondary School Curriculum

ED 225 Teaching Social Studies in Secondary Schools

ED 261 Current Directions in Curriculum and Instruction

ED 333 Curriculum Concepts, Planning and Development

ED 377 Seminar in Educational Psychology

ED 391 Master's Thesis Research

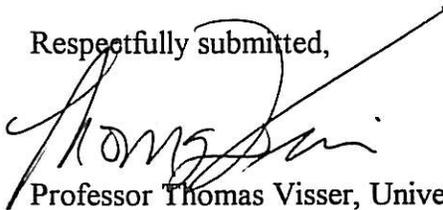
ED 397 Problems in Education (Individual work plan)

Students could be permitted to do their thesis work in either historic preservation or education for this degree.

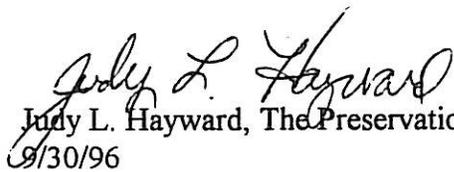
The instructors who participated in the pilot course in July, 1996 indicated that such a program as the one we have outlined above would be of interest to them. We believe that the development of such a program would accomplish the following goals:

1. Knowledge and skill about historic buildings would increase in vocational teachers and their students.
2. Students whose teachers have completed this program would be prepared for entry level jobs with construction and building trades firms working on existing and historic buildings.
3. Teachers and students would learn skills that would make them better stewards of older homes.
4. Professionals tell us that there is a higher degree of job satisfaction from preserving historic fabric than from its destruction or new construction. Motivated workers are better citizens and less prone to social problems, delinquency, and joblessness.
5. Preservation and restoration skills help building tradespeople to stay employed in periods of economic decline.

Respectfully submitted,



Professor Thomas Visser, University of Vermont



Judy L. Hayward, The Preservation Institute, Historic Windsor, Inc.

9/30/96

HP 202: Preservation Education Skills for Building Trades Teachers  
Historic Preservation Summer Institute  
University of Vermont, Burlington, VT 05405  
July 8-12, 1996

Instructors: Thomas Visser, University of Vermont, 802-656-0577  
Judy Hayward, Preservation Institute for the Building Crafts, 802-674-6752

**Monday**

9-10:30 Introduction and overview  
10:30-10:45 break  
10:45-noon Historic Preservation: What is it?/ Thomas Visser  
12:00- 1:00 Lunch at Waterman Manor, top floor, Waterman Building, UVM  
1:00-4:00 Historic architectural styles/ TV  
4:00- 5:00 architectural tour

**Tuesday**

9-10:30 Conservation of historic wooden buildings/ TV  
10:30-10:45 break  
10:45-noon wood conservation & carpentry:  
Training issues/case studies and seminar discussion/ Judy Hayward & TV  
12:00- 1:00 lunch break  
1:00- 2:45 Timber framing/TV  
2:45- 3:00 break  
3:00- 4:00 Managing project sites/ Working with outside organizations,  
funding support/ liabilities/ JH & Eugene Reid  
4:00-5:00 Training issues/case studies and seminar discussion/ JH

**Wednesday**

9-10:30 Paint and decorative finishes/ TV  
10:30-10:45 break  
10:45-11:30 Paint  
11:30-12:00 Training issues/case studies and seminar discussion/ TV & JH  
12:00- 1:00 lunch break  
1:00- 2:30 Lead and other hazards/case studies and seminar discussion/ TV  
2:30- 2:45 break  
2:45-4:30 Plaster/ TV  
4:30- 5:00 Training issues/case studies and seminar discussion/ JH & TV

**Thursday**

9-10:30 Conservation of historic building materials/ Masonry  
10:30-10:45 break  
10:45-11:30 Masonry  
11:30-12:00 Training issues/case studies and seminar discussion/ TV & JH  
12:00- 1:00 lunch break  
1:00- 5:00 Shelburne Museum site visit. Route 7, Shelburne, VT. Meet at Visitor's  
Center. Complementary Admission. Education Department/ Cathy Wood,  
Garet Livermore; S. S. Ticonderoga conservation project/ Chip Stulen;  
Maintenance of buildings & grounds/ Peter Marsh

**Friday**

9-10:30 Metals and glass & windows  
10:30-11:00 Training issues/case studies and seminar discussion/ JH & TV  
11:00-noon Maintenance  
12:00- 1:00 lunch break  
1:00- 5:00 Student presentations  
Educational opportunities/ Certification and standards/ Russell Newton  
case studies

**HP 202: Preservation Education Skills for Building Trades Teachers**  
Historic Preservation Summer Institute, University of Vermont, Burlington, VT 05405  
July 8-12, 1996

**Reading Assignments**

Tuesday

- *Secretary of the Interior's Standards for Historic Preservation Projects* (1985)
- Preservation Briefs 10, 17, 18, 20, 26

Wednesday

- Preservation Briefs 6, 8, 10, 21, 22, 23, 28
- Skim over other texts and articles

Thursday

- *Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995)
- Preservation Briefs 1, 2, 5, 7, 15, 16

Friday

- Preservation Briefs 3, 4, 9, 11, 12, 13, 14, 19, 24, 25, 27
- *Practical Preservation Report: Managing Maintenance*, John Leeke
- Finish reading all other articles

**Written Assignment**

Submit an outline for a research paper suitable for publication or presentation at a scholarly or professional meeting that explores the potential for integrating historic preservation into building trades training programs or develop a model lesson plan for an instructional unit that incorporates historic preservation into a building trades course. Due Friday AM, July 11, 1996.

**Oral assignment**

In a 10 minute oral presentation, discuss how you could work the material offered in this course into your teaching and/or discuss your plans for the final written project. Due Friday afternoon, July 12, 1996.

**Term paper**

Research and prepare a 10-15 page paper suitable for publication or presentation at a scholarly meeting that explores the potential for integrating historic preservation into building trades training programs. Due August 30, 1996.

# Curriculum Vitae

## Thomas D. Visser

### **Business Address:**

Architectural Conservation & Education Service, Department of History, University of Vermont,  
Burlington, VT 05405 (802) 656-0577

### **Education and Professional Training Courses:**

University of Vermont, Burlington, Vt., M.S. Historic Preservation. 1986.

University of New Hampshire, Whittemore School of Business and Economics, Durham, N.H.,  
B.S. Business Administration. 1973.

Université de Montréal, Ecole d'Architecture, and Heritage Montreal, Montreal, Quebec, Canada,  
Architectural Renovation and Restoration Summer School. 1985.

University of California, College of Environmental Design, Berkeley, Cal., Summer Session  
Courses, Environmental Design and Computer Applications in Architecture. 1983.

Association for Preservation Technology, Professional Training Courses:

Paint Analysis and Conservation, San Francisco, Cal. 1985.

Historic Concrete: Investigation & Repair, Chicago, Ill. 1989.

(& ICOMOS Canada) Masonry Conservation, Ottawa, Ontario. 1989.

### **Awards and Fellowships**

National Endowment for the Arts, Design Arts. Individual grant to research a field guide on New  
England barns. 1991-1993.

University of Vermont. Graduate College Fellowship. 1984-1985.

University of New Hampshire. Alpha Chi Sigma, Chemistry Honor Society. 1970.

### **Employment Positions**

Research Assistant Professor & Lecturer. Historic Preservation Program & Canadian Studies  
Program. Department of History, University of Vermont, Burlington, Vt. 1988- present.

Coordinator, Architectural Conservation and Education Service, Historic Preservation Program,  
Department of History, University of Vermont, Burlington, Vt. 1985- present.

Restoration Coordinator. National Trust for Historic Preservation/ Yankee Intern Program, and  
Flynn Theatre for the Performing Arts, Burlington, Vt. June- August 1985.

Preservation contractor and craftsman. Rehabilitated historic buildings in New Hampshire and  
Vermont. November 1976- August 1984.

### **Courses Developed & Taught (UVM Historic Preservation Program).**

Advanced Architectural Conservation. 1986-present

Conservation Techniques for Historic Structures. 1987-Present

Researching Historic Structures and Sites. 1995-present.

Preservation Education Skills for Building Trades Instructors. Summer 1996

History of American Building Technology. Summer 1993

Barns: History and Conservation. Summer 1992, 1994, 1996

Lead Paint Abatement Strategies for Older Buildings. Summer 1992

Discovering the History of House and Home . Co-taught. Summer 1991

Conserving Historic Farm Buildings. Historic Preservation Summer 1990

Architectural Conservation Workshop. Co-taught. Summer Institute. 1986-1989

Restoring Old Houses. Summer Institute. 1987-1990

### **Professional Advisory Positions**

Preservation Action, Washington, DC, board of directors, since 1995.  
Vermont Preservation Roundtable, Montpelier, Vt., since 1986.  
Preservation Institute for the Building Crafts, Windsor, Vt. Advisory Board, since 1986.  
District #4 Environmental Commission. State of Vermont. Commission member by gubernatorial appointment, since 1992.  
Design Review Board, City of Burlington, Vermont. 1992-present. Chairman.  
Historic Preservation Review Committee, City of Burlington, Vermont. 1992- present.  
Vermont Preservation Roundtable, Montpelier, Vt. 1986- present.  
Preservation Institute for the Building Crafts, Windsor, Vt. Advisory Board. 1986-present.  
Shelburne Museum, Shelburne, Vt. Long Range Planning Task Force. 1990 - 1991  
Preservation Plan Committee. Vermont State Preservation Office, Montpelier, Vt. 1989-91.  
Cultural Facilities Grants Review Committee. Vermont Historical Society, Montpelier, Vt. 1992-present.

### **Professional Organizations**

Association for Preservation Technology International (APT)  
International Council on Monuments and Sites (US ICOMOS & ICOMOS Canada)  
Vernacular Architecture Forum

### **Historic Site Reviews and Nominations to the National Register of Historic Places**

National Register Nomination. Brook Farm, Cavendish, Vermont. 1993.  
Historic Site Assessment. Wright Farm, Mill Pond Road, Colchester, Vt. Chittenden County Circumferential Highway Project. Subcontract to UVM Consulting Archaeology Program. 1993.  
Historic Site Assessment. 456 Williston Road, Williston, Vt. Chittenden County Circumferential Highway Project. Subcontract to UVM Consulting Archaeology Program. 1993.  
National Register Nomination. Rockledge Farm, Swanton, Vermont. 1992.  
National Register Nomination, Crystal Lake Falls Historic District, Barton, Vt. 1992.  
Historic Site Review, The Orange Smalley-Thomas Davenport Shop, Forestdale, Vt. 1992.  
Historic Sites Review. Bennington Bypass Highway Project VAOT F019-1(4). 1991.  
National Register Nomination, Redstone Historic District, Burlington, Vt. Co-authored with R. Larson, et. al. 1991.  
Historic Structures Report, Bellows Falls Freight House, Bellows Falls, Vt. 1990.  
Historic Site Review, Main Waste Water Treatment Plant, Burlington, Vt. Co-authored with E. Rosin. 1990.  
National Register Nomination. Montgomery Ward Building, Burlington, Vt. 1990.  
Historic Site Review. Day House, c. 1790, Essex, Vt. Chittenden County Circumferential Highway Project. Subcontract to UVM Consulting Archaeology Program. 1989.  
National Register Nomination. Mountain View Stock Farm, 1989.  
National Register Nomination, Montpelier Historic District Amendment, 1989.  
National Register Nomination, Jericho Village Historic District. With Suzanne Jamele. 1989.  
National Register Nomination, Warren Village Historic District. Co-authored with Mark Wolfe. 1989.  
National Register Nomination, Winooski Falls Historic District. Co-authored with Reid Larson. 1988.

**JUDY L. HAYWARD**

P. O. Box 577  
South Royalton, Vermont 05068  
(802) 763-2250

**SUMMARY OF ACCOMPLISHMENTS**

Fifteen years of progressively more responsible management experiences in nonprofit preservation organizations and public agencies. Numerous leadership positions in civic and professional affairs. Extensive interaction with federal, state, and local preservation agencies; elected and appointed governmental representatives; and volunteers, members, and students. Frequent public speaking engagements and coordination of 6-12 educational programs annually.

**PROFESSIONAL EXPERIENCE**

**HISTORIC WINDSOR, INC. (HWI)**

Executive Director

Windsor, VT

(6/86-present)

Manage 400 member, community-based historic preservation organization. Supervise staff; coordinate fundraising; plan and oversee \$200,000+ budget annually; manage 20,000 sq. ft. historic building with 15 tenants; maintain public relations with Town, regional media, and State and Federal Agencies. Work with 50 plus volunteers on projects annually.

**THE PRESERVATION INSTITUTE for the BUILDING CRAFTS (PIBC)**

Division Director--HWI

Windsor, VT

(10/82-5/86, 4/89-present)

Administer a nationally acclaimed rural preservation skills training program. Developed program from one-page goal statement and \$4,000 National Trust grant into annual workshop series -- now in its 14th year -- which has enrolled more than 2,000 people. Conduct needs assessments; help develop syllabi and curricula; and hire instructors. PIBC and HWI have been featured in national publications such as *The Wall Street Journal*, *Historic Preservation*, *Building Renovation*, and *Fine Homebuilding*.

**UNIVERSITY OF VERMONT AND LEBANON COLLEGE**

Adjunct Faculty

Burlington, VT and Lebanon, NH

Taught "*Preservation Skills for Vocational Building Trades Teachers*" at UVM and guest lecturer for other courses in the UVM Historic Preservation Program (graduate level). Taught "*Exploring Upper Valley Architecture*" and "*Preserving Old Houses*" for regional Community College

(1995-present)

**PORTSMOUTH ADVOCATES, INC.**

Grant Coordinator

Portsmouth, NH

(10/81-10/82)

Created public education and technical assistance programs for fledgling nonprofit historic preservation organization. Financed by one-year grant from N.H. State Historic Preservation Office.

**SAINT-GAUDENS NATIONAL HISTORIC SITE (National Park Service)**

Interpreter, Lead Park Technician, and Park Aid.

Cornish, NH

Seasonal, 1977-1982)

## COMMUNITY SERVICE AND PROFESSIONAL AFFILIATIONS

- 1994-1996: Royalton, Vermont Planning Commission
- 1991-1993: Craftsman Training Coalition Steering Committee--sponsored by the National Trust for Historic Preservation and the Association for Preservation Technology, International (presently inactive).
- 1990-1994: Preservation Action, Washington, DC: Board
- 1988-Present: Windsor Area Rotary Club, Windsor, VT: 2nd vice president, 1996
- 1989-1991: Vermont State Historic Preservation Planning Committee
- 1988-Present: Preservation Trust of Vermont, Board; president, '92-'94; vice pres., '91; asst. treasurer, '95-'96
- 1980-1987: Claremont, NH Historic District Commission; chairman, 1984-1986
- 1979-1988: Claremont Opera House, Inc., Board; clerk, 1979-1985

## AWARDS AND RECOGNITIONS

- 1992, 1993: Listed in *Who's Who Among Rising Young Americans*
- 1993: Young Careerist, Ottauquehech Business and Professional Women, Woodstock, VT
- 1992: Scholarship recipient, Victorian Society in America, London Summer School in Nineteenth Century Studies
- 1990: Eva Gebhard-Gourgaud Foundation: Award of Merit for Historic Preservation
- 1987: Governor's Award for Fire Prevention: Fire Safety and Historic Preservation Education Project
- 1986: Preservation Trust of Vermont Award given to The Preservation Institute for the Building Crafts

## PUBLICATIONS

Compiled and edited (with Thomas C. Jester, National Park Service Preservation Assistance Division) "Accessibility and Historic Preservation: A Resource Guide," a 600-page compendium of information regarding accessibility issues for disabled people and historic properties. (Editions published in 1992, 1993, and 1994.)

## EDUCATION

- Master's Degree in Public Administration** May, 1981  
University of New Hampshire  
Internship: City of Dover, NH, Finance Department
- Bachelor's Degree in Political Science** May, 1979  
Valparaiso University (IN)  
Minor in Journalism  
Internship: University Public Relations Office
- Certificate in Nineteenth Century Studies** July, 1992  
London Summer School Victorian Society in America

## SPECIAL SKILLS

- FUNDRAISING
- Raised \$20-100K annually for HWI's operating budget from foundations, business, government, and individuals.
  - Currently under contract with the National Trust for Historic Preservation for U. S. Dept. of Justice grant regarding ADA(Americans With Disabilities Act).
  - Managed capital campaign which raised \$400,000 for HWI over six years.
  - Launched annual membership appeal for Claremont Opera House.
  - Received \$40,000 grant from National Center for Preservation Technology and Training-1996
- MARKETING & PUBLIC RELATIONS
- Attracted national media attention for Historic Windsor/Windsor area with coverage in *Early American Life* and *The Boston Globe*.
  - Coordinated task force of Chamber of Commerce representatives and other volunteers to produce four color brochure to market Mount Ascutney region.
  - Wrote copy for numerous promotional pieces to market workshops, other educational activities, and fundraising appeals.
- VOLUNTEER & BOARD INVOLVEMENT
- Remained accountable to and worked hand-in-hand with a 15 member boards for fourteen years.
  - Secured funding or volunteer commitments from five interns to take on such projects as development of a 30-page walking tour booklet of Windsor's historic downtown.
  - Served on six boards including stint as chair of Historic District Commission and president of a statewide, nonprofit historic preservation organization.
- PROGRAM COORDINATION & PRESENTATIONS
- Conducted four national conferences on accessibility and historic preservation in Denver, Washington, Chicago, and Springfield, MA. (Each program featured more than 10 speakers, 60-120 participants, and 16 hours of training.)
  - Taught or assisted in teaching preservation skills workshops at sites throughout New England.
  - Participated in National Trust for Historic Preservation Annual Conference panel discussions: "*Preservation Skills Education*" Seattle, 1984; "*Accessibility and Historic Preservation*, Ft. Worth, TX, 1995 and Chicago, 1996.
- MANAGEMENT & ADMINISTRATION
- Successfully navigated HWI through most recent recession by preparing tight budgets and trimming expenses when needed.
  - Routinely work with auditors and legal counsel; intermittently collaborate with consultants for specific projects.
  - Assisted in spin-off of Historic Windsor's Craft Center division in 1995 with resulting programmatic and financial improvements for HWI and the new Craft Center management.
- PRESERVATION TECHNICAL ASSISTANCE
- As part of HWI duties, have aided more than 50 Northern New England nonprofits in problem identification and solutions regarding preservation, fundraising, and management needs.

9/24/96

12 JULY 1996

To: Prof. Thomas D. Visser and Ms. Judy Hayward

From: Members of: Preservation Education Skills for Building Trade  
Teachers - Pilot Course, Summer 1996

BILL BAYNHAM

TOM PLEASANTON

DAVE DALY

EUGENE REID

JOHN JOHNSON

STEVE SEBASTIAN

KEN MARCUS

ED TAYLOR

STEWART OLSON

STEVEN WUNSCH

RE: ORGANIZATION OF FINAL PROJECTS

AFTER PRELIMINARY DISCUSSION, A MEETING WAS HELD ON 11 JULY, 1996 AT THE HOME OF BILL BAYNHAM TO DISCUSS THE POSSIBILITY OF COMBINING INDIVIDUAL EFFORTS TO CREATE A RESOURCE FOR CLASS MEMBERS. IT WAS DECIDED THAT A COLLECTION OF UNITS COULD BE DEVELOPED BY CLASS MEMBERS AND THAT THEY MIGHT BE SHARED THEREBY IMPACTING MORE BUILDING PROGRAMS, AND PROVIDING INSTRUCTORS WITH AN ADDITIONAL RESOURCE IN ON-GOING PROGRAMS.

A TENTATIVE LIST OF TOPICS WAS DEVELOPED BY ONE CLASS MEMBER (STEWART OLSON) AND A "DRAFT" LIST OF "ACTIVITIES AND TOPICS" WAS DEVELOPED BY ANOTHER MEMBER (JOHN JOHNSON). THE USE OF THE ACTIVITIES AND TOPICS WAS DESCRIBED IN A MATRIX FORMAT, WITH SOME EXAMPLES PROVIDED. ADDITIONALLY, THE CLASS DEVELOPED AND REFINED A FUNDAMENTARY OUTLINE FOR A TYPICAL "UNIT OF STUDY" WHICH WOULD BE ABLE TO BE USED IN A VARIETY OF CLASS FORMATS.

IT IS PROPOSED THAT EACH CLASS MEMBER DEVELOP AND RESEARCH A TOPIC AND SUBMIT IT FOR INCLUSION IN A "CURRICULUM RESOURCE GUIDE". THE GUIDE WOULD CONTAIN THE UNITS DEVELOPED BY CLASS MEMBERS AND COPIES DISTRIBUTED TO EACH MEMBER. THIS RESOURCE GUIDE IS THE FIRST EDITION (AS IS FITTING FOR A PILOT COURSE), BUT COULD BEGIN TO PROVIDE A MORE EXTENSIVE BASIS FOR INCLUDING PRESERVATION EDUCATION CONCEPTS AND PRACTICES IN VOCATIONAL BUILDING TRADES PROGRAMS AND TECHNOLOGY EDUCATION PROGRAMS. INDEED, INCLUSION OF PARTS OF THESE UNITS MAY BE EFFECTIVE IN MANY DISCIPLINES AND INDIVIDUAL EDUCATIONAL ACTIVITIES.

ON A LARGER SCALE, THE INFORMATION CONTAINED IN THE GUIDE MAY BE USEFUL AS ENRICHMENT MATERIAL FOR MANY INTEGRATED EDUCATION PROJECTS OR POSSIBLY AS A CENTRAL FOCUS FOR SCHOOL-WIDE THEMATIC EDUCATION ACTIVITIES. THE MEMBERS OF THE CLASS ENCOURAGE USE OF THE MATERIALS WHEREVER APPROPRIATE FOR EDUCATION OF YOUNG (AND NOT SO YOUNG) PEOPLE.

THE "TOPICS FOR CURRICULUM STUDY" IS ATTACHED.

IT IS INTENDED TO PROVIDE AN OVERVIEW OF TOPICS, BUT SHOULD NOT BE PERCEIVED AS LIMITING. IT IS BASED ON TOPICS COVERED IN THE READING AND IN CLASS. IT WAS USED AS A BASIS FOR CLASS MEMBERS TO SELECT INITIAL TOPIC AREAS FOR DEVELOPMENT OF EDUCATIONAL UNITS.

## TOPICS FOR CURRICULUM STUDY

Grant writing and finance.

Paint, history, evaluation exterior/interior.

Masonry, cleaning, waterproofing, preservation of historic concrete, joints, jointing, materials, history.

Plaster, History of materials, restoration, new plaster ornamental.

Architectural styles and character, Identification.

Accessibility for historic properties, codes/laws slope grade.

Understanding old buildings, the process of architectural investigation and assessment of needs.

Protecting cultural landscapes, planning treatment and management, history.

Roofing, wood, slate, ice dams, structure.

Windows, history, assessment, repair, restoration, energy conservation.

Timber frames, history, structure, methods, tools, restoration.

A LIST OF CLASS MEMBERS AND TOPICS WAS DEVELOPED AT THE MEETING ON 11 JULY. WHILE THESE TOPICS ARE BROAD, THE DEVELOPED UNITS WILL MORE ADEQUATELY DEFINE THE SCOPE AND SEQUENCE OF EDUCATIONAL ACTIVITY FOR EACH. THE LIST OF TOPICS AND CLASS MEMBERS IS PROVIDED BELOW:

<u>CLASS MEMBER</u>	<u>TOPIC</u>
BILL BAYNHAM	WINDOWS
DAVE DALY	MASONRY
JOHN JOHNSON	GRANT WRITING FOR HISTORIC PRESERVATION
KEN MARCUS	ARCHITECTURAL STYLES/CHARACTER
STEWART OLSON	TIMBER FRAMING
TOM PLEASANTON	MASONRY
EUGENE REID	PROJECT PLANNING
STEVE SEBASTIAN	ROOFING SYSTEMS
ED TAYLOR	ACCESSIBILITY CODES/LAWS
STEVEN WUNSCH	PROJECT PLANNING/INVESTIGATION

THE DEVELOPED LISTS OF "ACTIVITY" AND "TOPICS" TO BE CONSIDERED IN THE DEVELOPMENT OF THE UNITS ARE PROVIDED BELOW. THESE LISTS ARE INTENDED TO PROVIDE A TWO DIMENSIONAL MATRIX WHICH CAN BE USED TO ANALYZE THE UNIT TOPIC FOR <sup>①</sup> DUPLICATION OF ACTIVITY, <sup>②</sup> INCLUSION OF CONTENT IN ACTIVITIES, AND <sup>③</sup> OPERATIONAL ADEQUACY AS THE UNIT IS DEVELOPED.

## MATRIX VARIABLES: (DRAFT)

<u>ACTIVITY</u>	<u>TOPICS</u>
TEXTBOOK	INTRODUCTION
OTHER READY REFERENCES	HISTORIC PRESENTATION
BUILDING MATERIALS (I.D. & USE)	BUILDING STYLES
HAND AND POWER TOOLS (USE)	WOOD
SAFETY PRACTICES (= ALL ACTIVITIES)	PAINT/DECORATION
FIELD TRIPS	MASONRY
PHOTOGRAPHY / VIDEOGRAPHY	PLASTER
GUEST SPEAKER	METALS
LOCAL HISTORY	GLASS
MEASUREMENT	H.V.A.C.
DRAWING / DOCUMENTATION	ELECTRICITY
TREATMENT OPTIONS	20 <sup>TH</sup> CENTURY MATERIALS
SPECIFICATION WRITING	ENERGY CONSERVATION
BASIC ESTIMATING	MAINTENANCE
PROJECT	
PRODUCT	
REPORT	
EXAM	

THESE VARIABLES AS LISTED ARE NOT A FINAL OR COMPLETE SET. IT IS EXPECTED THAT OTHERS WILL APPEAR AS INDIVIDUAL UNITS ARE DEVELOPED.

A GENERIC OUTLINE FOR A UNIT OF STUDY WAS DEVELOPED AT THE MEETING. IT IS NOT DESIGNED TO LIMIT THE EXTENT OR CONTENT OF THE UNITS, BUT IS DESIGNED TO PROVIDE SOME UNIFORMITY TO THE ENTRIES IN THE RESOURCE GUIDE. THE UNIFORMITY IS IN THE PRESENTATION, NOT CONTENT.

I UNIT \_\_\_\_\_ (TITLE) / (TOPIC)  
ESTIMATED TIME \_\_\_\_\_ (DAY)  
NUMBER OF LESSONS \_\_\_\_\_

II OBJECTIVES (UNIT): (WHAT THE STUDENT WILL KNOW, AND BE ABLE TO DO AS A RESULT OF THIS UNIT. ALSO INDICATE ATTITUDES/HABITS WHICH ARE DEVELOPED OR FURTHER DEVELOPED IN THIS UNIT)

III LEARNING ACTIVITIES (LIST OF LESSONS & ACTIVITIES)

A TEACHER (WHAT THE TEACHER WILL DO - SHOULD BE COORDINATED WITH LESSONS)  
(SHOULD INCLUDE A LIST OF LESSONS FOR UNIT)

B STUDENT (WHAT THE STUDENT WILL DO - SHOULD BE COORDINATED WITH LESSONS)

(INDICATE: UNDERSTANDINGS, SKILLS, AND ATTITUDES - SEE "OBJECTIVES")

IV RESOURCES / MATERIALS (COORDINATED WITH LESSONS - "BILL OF MATERIALS & RESOURCES FOR THE ENTIRE UNIT & ACTIVITIES)

V REFERENCES (HISTORICAL, TECHNICAL, OTHER)

VI EVALUATION (METHOD/PROCEDURE) (WHAT THE STUDENT HAS DONE, AND  
\_\_\_\_\_

IT IS UNDERSTOOD AND ACCEPTED THAT EACH UNIT AS TAUGHT IS A PRODUCT OF THE INSTRUCTOR. THE OUTLINE PROVIDED IS INTENDED TO PROVIDE ORGANIZATION FOR THE TOPICAL MATERIAL; IT IS NOT INTENDED TO PRESCRIBE TEACHING ACTIVITY BY PROFESSIONAL EDUCATORS. IT LIKEWISE IS NOT INTENDED TO BE A SUBSTITUTE FOR LESSON PLANS OR OTHER COURSE-RELATED DOCUMENTS.

RESPECTFULLY SUBMITTED

EDT.

The Building Construction and Restoration Carpentry program is a two year Vocational Education course at Canaan Memorial High School in Canaan, Vermont. The program is available to junior and senior high school students as well as adults on a space available basis. The 1995/96 school year has the program enrollments at 12 with 7 boys, 4 girls and one adult.

The program started to concentrate on building conservation in 1992 when the need for the renovation of existing structures outweighed the need for new construction in the local area. The restructuring of the Building Trades program made student labor available to nonprofit organizations seeking carpentry work. We now became a community based program coupling vocational education and community service.

With several projects in line, the students first went to work for the local Historical Society. Renovation of the second floor of the town library (1842) to house a local heritage museum got underway. This project involved the restoration of four rooms, a hallway and staircase. Before long the students were studying preservation briefs and pouring over articles out of Old House Journal.

The program soon became fourfold. It gave students high level skills in building conservation. It offered a vehicle to nonprofit organizations to get carpentry work done for the cost of materials. It gave students a sense of pride and ownership in the community and it brought together high school students and community members working for a common goal. The project was completed and a long awaited dream has become a reality for the Canaan Historical Society. A plaque hangs in the entrance of the museum recognizing the outstanding achievement of the Building Restoration students.

The local publicity of this project turned my list of projects to ponder into a waiting list of perspective jobs. After the construction of a playground and picnic shelter for the Dept. of Parks and Recreation and an approved Accessibility Project to a building listed on the National Register we began work on the old town house (1850). With twice the class size and an increase in nontraditional enrollment we started work on the two year

project. The building is situated on the town common and has been in a state of disrepair for many years. The project goals were to restore the exterior of the building to its original appearance and make it handicap accessible. The first floor which housed the old town school was to be renovated into a Vermont Interactive Television Studio, a small office and handicap accessible lavatory. The half basement that held the town jail at one time was renovated into lavatory facilities for the nearby town recreation park. The second floor that served as the town meeting hall was renovated into a two bedroom apartment. The project will be finished with the replication of a bell tower that graced the top of the building many years ago.

Students take part in all aspects of the project. The first order of business is structural evaluation and assessment. These lessons provide students with the skills necessary to identify problems, recognize hazards and it sets the stage for problem solving. Much preliminary work must be completed before the building is altered. This work includes making sketches, video taping, taking photos, conducting interviews with towns people and studying land records. This may not sound like the job of the carpenter, but it gives the job character and allows the students to form a relationship with the project. This also lends itself to get other classes involved. I have had the English Class conduct interviews of people who knew the building as a school. The History Department did a title search and town report study to see how the building came to be, how much it cost and who built it. The cross curriculum work is also a good method for younger students to view my program and become perspective vocational students.

The exterior of the building had two roofed porches, one on each entrance to the first floor. Removal of these was short work with the town bucket loader and the "Big" pry bars. The south end of the building had a set of stairs cobbled on that allowed entrance to a section that provided office space at one time to the school superintendent. Three students harnessed in fall protection went to work and within two days the team had carefully removed the stairs. A second team of first year students practiced use of the

circular saw, hand saw and sawzall techniques on the pile of rubble turned kindling. There were many clapboards to replace and window sills to restore. These two jobs lend themselves to tasks and tools that don't often get called on in new construction. Students use ram type nail pullers and floor chisels to replace clapboards. The clapboards must be pulled back to blend the old with the new. One of my advisory board members told a student that if she could "patch that mess up she would have no problem applying new clapboard on a house." The student replied "there's no challenge in siding a new house."

The interior of the building needed much demolition work. The salvage of mouldings, doors and framing lumber exposes students to a variety of skills that new construction does not allow. With the first floor cleaned out of years of remuddle the outline of a single room school was visible. It wasn't long before new partitions were up and the job site buzzed with the activity of electrical and plumbing subs working with a few of my students as their helpers. As the school year came to an end the first floor was ready for its new tenants. A building that once housed students writing with quill and ink has come full circle to become a Vermont Interactive Television site that utilizes the latest in Telecommunication Technology.

As I took the summer to review the competencies that were completed I found that I far exceeded what I normally covered. Students were introduced to the Department of Labor and Industries and the many inspections that must take place for a public building. The Fire Marshall, Boiler Inspector and all departments involved took the time to talk with the students and explain what their involvement was in the project. I brought in the Health Department to explain the hazards of lead paint and how to handle it. The skills and knowledge that the students received on this type of a building conservation project really gave them a well rounded feel of what a carpenter can do and the many options the field offers.

This past fall we began work on the second floor apartment and the lavatory facility in the basement. Some of the students took part in the design and scheduling of

the project. I feel this makes them part of the entire job and gives them ownership. The second floor was one big room with a small stage at one end. It served as the town meeting hall for many years. The space was partitioned off, the ceiling height was left at ten feet and the stage was incorporated into the living room. Someone heard about the project and offered us some salvaged eight foot doors with transoms. These coupled with ceiling fans gave the apartment a real nice feel. We will be finished this June and will have the nicest rent in town.

The basement of the building was to be converted into a lavatory facility for the adjacent recreation park. This took some backhoe work to make the exterior entrance more assessible to the park. A rented jack hammer made way for the plumber to run his drain lines and convinced a few students not to go into bridge work. The finished lavatory facility will save the park six hundred dollars a year in portalets and everyone who uses the park will eventually have to see our work.

The project nears completion and we will have an open house this summer during the annual Sugar on Snow and Homecoming weekend. The move from new construction to building conservation has been very rewarding for myself and the students. The students get much recognition from people around town who appreciate their efforts in turning an eyesore into a restored landmark that graces the town common. The enthusiasm and interest that I see in students during a conservation project is much greater than in that of new construction. People like nice old houses and the demand for them is increasing every year. This coupled with the cost of new construction makes building conservation a viable alternative to the traditional building trades program. The public relations that comes with the rejuvenation of a neighborhood or a particular building far exceeds any that a new ranch house in a development will bring. The skills that students will be exposed to are more entry level than in that of new construction. I believe that the work the program has done also firms up some job security. For a teaching salary, residents see students learning skills and a revitalization project makes everyone feel good.

Even if enrollments decrease, the program is saving the community money and is considered an asset.

In the fall of '96 you will find us restoring the cupola on the high school and then we hope to move to the Kenneth Poore Farm in neighboring Stewartstown, New Hampshire where we will be restoring an 1826 cape as part of a working farm museum.

The Integration of Historic Preservation  
Principles in the Building Trades Program

Tom Pleasanton

Polytech High School, Dover, Delaware

## The School

The school is a comprehensive high school in a rural Delaware setting. The number of students that attend the school is approximately 1000 in grades 9 through 12. The number of full time teaching staff is 100. In addition to the full complement of academic subjects there are also 18 vocational shops <sup>from which</sup> that each and every student in grades 10 through 12 will have chosen ~~as~~ a career field. The approximately 300 ~~remaining~~ students in the ninth grade ~~will~~ make a final shop selection prior to entering the tenth grade.

The hierarchy of the school is typical of most. The School Board is at the upper level of decision making. There are currently eight members residing on the School Board. Next there is the Office of Superintendent in which there is the Superintendent, an Administrative Assistant, and a Business Manager. And lastly, the high school administrative staff consisting of a principal, two assistant principals, a Director of Transportation, and a Dean of Students.

## Implementation Design

The high school administrative staff, with emphasis on the principals, <sup>provides</sup> is the administrative approval that may be needed when making alterations to your curriculum to include aspects of historic preservation. Before such contact is made the instructor should have a well organized plan that includes the need for this material, the introduction and delivery of the material, and measurable objectives for the lessons. For the case of integration the instructor should seek out the competencies or requirements of the academic subjects and, with the assistance of the academic instructor(s), map out situations where cross-disciplinary or transdisciplinary relationships can be drawn.

## The Implementation Process

For this particular integration model we will use the thematic approach. Using the thematic approach provides for the identification of learning objectives, the supportive context for meaningful and relevant learning, and as an organizational tool (Rand, 1994). When brainstorming ideas for a thematic unit there should be a few questions that should be considered. These questions are: Does this theme build on the students' previous knowledge and experience? Will this theme engage and interest the students for a length of time? What connections and relevance to the world around does this theme offer?(Seely, 1995).

\* well put

The questions are meant to set guidelines so that themes that have relevance and real learning potential is formed.

The group responsible for the development of these themes should include members from the same group that will be teaching these lessons. It is also recommended that students be permitted to attend these meetings to lend their view in this process.

great idea

Once the theme has been established and the interdisciplinary connections have been drawn, the lessons can be developed to support the thematic unit. The length and material covered in these lessons may vary greatly, but the rule regarding length should be, "as long as it takes to fulfill the objectives without dragging on".

## Sample Theme

When developing the theme for the integration model care should be taken to ensure that the theme is broad enough in nature to allow for the many disciplines to

The lessons could progress to include material analysis, documentation of historic properties, participation in grant writing, <sup>flat and</sup> ornamental plaster restoration, and research of occupations directly related to preservation. Throughout this unit of study the overlying theme of connections would tie together historic preservation and masonry with the other disciplines involved.

### Carpentry

Connections in carpentry would follow the same course of action as that of masonry. Due to the broad nature of the field of carpentry you may have to limit these lessons to wooden structures and buildings dating back to a specific era. Again the same types of lessons could be used. Lecture, guided shop practice, field trips, guest speakers, and on site restoration experience could be used for the lessons as well as the evaluation. Many of the carpentry lessons would tie in well with the masonry lessons for the efficient use of time and other resources. As with masonry, carpentry would emphasize <sup>ze</sup> the use of connections; not only the physical connections holding the structures together, but also the connections between the work force and community, materials and locations, and geographic regions and architectural styles as a few examples.

### Math

The connections between math and the lessons presented in carpentry and masonry would be numerous. Geometry, algebra, and technical math would be some of the more useful types of math for these areas.

### Social Studies

Social studies would be a major support in the connection of the disciplines. The history of building and the social and economic developments that influenced this history would be researched. Social studies could introduce the importance of historic preservation in our society. Social studies could also research the potential careers in this field. The comparison of our value systems as opposed to those of our ancestors and how this influenced building might be a good starting point for this unit. There are numerous avenues with which to take the lessons in social studies and this subject could form the "backbone" of the connections theme.

### English

In English the students could read selected biographies of people that had influence on historic building(s). The students could also write fictional accounts of what their role might have been in a historical setting if they were a skilled carpenter or mason. The students could keep a daily journal that recorded the activities in their other classes and what the <sup>inter skt</sup> ~~inter~~ relationship was. As a part of the class requirements the student might be asked to present to the class the importance of historic preservation or what impact they feel it has had on their life. The English class would be an opportune place to put all of the new found knowledge in to a written or oral format for review.

Sample Lesson

A daily or weekly lesson plan can be developed for each particular aspect of the unit to give sequence and specificity.

UNIT: Connections/Historic Preservation

DUTY: Repair Damaged Brickwork

TASK: Repoint Mortar Joints

ENABLING COMPETENCIES: Student should have general knowledge of hand tools (identification and use). Student should have general knowledge of materials appropriate for the repair of mortar joints. Student should possess basic math and communication skills.

CONDITIONS FOR PERFORMANCE: Brick Trowel

Brick Hammer

Joint Chisel

Striking Iron

Brush

Various Size Containers

PERFORMANCE OF TASK: The student will repair a section of wall containing damaged mortar joints to the satisfaction of the instructor.

INSTRUCTIONAL RESOURCES:

Qualified Instructor

AGC Manual-Principles of BrickWork

Historic Preservation Briefs-#1, 3, & 35

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The Brick Institute of America's Brickwork Manual

Mark London:

EVALUATION OF TASK:

See "Performance Steps".

*Need to include an understanding of diagnostics.*

Summary

The assessment of an integrated curriculum does not conform well with the traditional assessment methods. Some of the better assessment methods that could be used with integrated curriculum would be student portfolios, application of skills, and observation of skills in performance based assessments.

Integrated lessons also require an increased investment of time. The traditional seven or eight period school day tends to inhibit the smooth flow of concepts and ideas. Block scheduling (80-120 minute periods) facilitates the integrated curriculum design in a much more effective manner.

The integration of historic preservation in the traditional building trades programs can be a natural and painless process. The benefits are numerous for both the student and the community. These principles of preservation should be part of every secondary building trades program in order to educate the future work force, a work force that will have a great influence as well as a great impact on the destiny of our historic structures.

7/12/96

D. Daly

HP 202

*Ex collect:  
outline  
+  
take sheet*

## Report Proposal Outline

As a class, we have proposed to develop a curriculum addendum guide uniformly designed to dovetail into Interstate Building Trades/Tech Ed Programs. My section of the Guide will consist of the following:

Course: VA Building Maintenance & Repair 8642, 43, 44

A. Unit: Masonry Repair

B. Tasks:

1. Describe <sup>w/</sup> historical progression of brick fabrication in America (Modify existing plan)
2. Explain differences between lime and portland cement mortars and describe historical uses of same (modify existing plan) *Could add gypsum + clay also*
3. Describe procedures for matching mortar type and composition as well as brick color and textures; perform field/lab task (design new lesson plan) of masonry replacement
4. Identify uses of quoins, arches, bond patterns, and chimney types as used in particular architectural styles (design new lesson plan) Perform masonry unit replacement following guidelines for historical preservation.
5. Perform ~~task~~ pointing procedures following guidelines for historical preservation (modify existing plan)
6. Perform cleaning procedures following guidelines for historical preservation (modify)

C. Learning Activities:

1. Lecture/discussion
2. Video
3. Guest Speaker
4. Field Trip

5. Textbook/workbook
6. Lab activities
7. Co-curricular activities

D. Resources:

1. Tools
2. Materials
3. Literature/handouts
4. Community resources

E. References:

1. Gov't Publications
2. Existing curriculum materials
3. Community Publications

F. Evaluative Criteria:

1. Students will meet existing guidelines for meeting task competencies list (state)
2. Students will complete oral/written checkout procedures (exam) to conform to academic curriculum evaluative standards.
3. Lab work will meet all pass/fail evaluative checklists standards.

Tech Prep Task Analysis Worksheet

PROGRAM OR COURSE BUILDING MAINTENANCE 8642-44

DUTY AREA

MASONRY REPAIR

TASK CLEAN/MAINTAIN MASONRY STRUCTURES AND REPLACE MASONRY UNITS/MORTAR JOINTS WITH REGARD TO HISTORICAL PRESERVATION GUIDELINES

PERFORMANCE OBJECTIVE

Conditions (Given): ① TOOLS ② MATERIALS ③ PREREQUISITE KNOWLEDGE OF HISTORICAL MATERIAL USAGE

④ REFERENCE MATERIAL

Performance (Task itself): CLEAN/REPLACE MASONRY UNITS AND MORTAR JOINTS IN HISTORICAL DWELLINGS

Standard (Basis for judging performance): MAINTENANCE/REPAIR OF HISTORICAL MASONRY FABRIC WILL FAIL UNLESS ANALYSIS IS DONE OF SAME WITH REGARD TO REPAIR MATERIALS.

CRITERION-REFERENCED MEASURE (Evaluation method)

1. APPEARANCE OF CLEANED/REPAIRED AREA
2. STRUCTURAL INTEGRITY OF SAME
3. DURABILITY/LONGEVITY OF REPAIR

RELATED ACADEMIC SKILLS

1. ABILITY TO FOLLOW WRITTEN/ORAL GUIDELINES
2. ABILITY TO DUPLICATE DEMONSTRATED SKILLS
3. MATERIAL SELECTION APPROPRIATE FOR JOB

WHERE TAUGHT

LAB

LIVE JOBSITE

Tech Prep Task Analysis Worksheet

PROGRAM OR COURSE BUILDING MAINTENANCE 8642-44

DUTY AREA  
MASONRY REPAIR

TASK DESCRIBE HISTORICAL TYPES OF MASONRY UNITS AND MORTARS; EXPLAIN IMPORTANCE OF MATERIAL DUPLICATION IN HISTORICALLY RELEVANT REPAIRS

PERFORMANCE OBJECTIVE

Conditions (Given): LEARNER PREPARATION (VIDEO, LECTURE, FIELD TRIP) AND RESEARCH (LIBRARY, CLASS TEXT, WORKSHEETS/WORKBOOK)  
 Performance (Task itself): EXPLAIN DIFFERENCES IN SOFT MUD AND HARD MUD BRICK PRODUCTION; EXPLAIN DIFFERENCES IN LIME-BASED AND CEMENT-BASED MORTARS.  
 Standard (Basis for judging performance): MAINTENANCE/REPAIR OF HISTORICAL MASONRY FABRIC WILL FAIL UNLESS ANALYSIS IS DONE OF SAME WITH REGARD TO REPAIR MATERIALS.

CRITERION-REFERENCED MEASURE (Evaluation method)

1. WORKSHEETS/TESTS
2. PARTICIPATION IN DISCUSSIONS/FIELD TRIPS
3. SELECTION OF PROPER REPAIR MATERIALS.

RELATED ACADEMIC SKILLS

Also Apprenticeships/LABOR HISTORY

1. SOCIAL STUDIES - HISTORY OF BUILDING MATERIALS
2. SCIENCE - CHEMICAL ANALYSIS OF MORTAR  
GEOLOGICAL CONTENT OF BRICK
3. READING - CONDUCT RESEARCH ON SUBJECT

WHERE TAUGHT

CLASSROOM

FIELD TRIP

Tech Prep Task Analysis Worksheet

PROGRAM OR COURSE

BUILDING MAINTENANCE 8642-44

DUTY AREA

MASONRY REPAIR

TASK IDENTIFY HISTORICAL PERIOD ARCHITECTURAL STYLES; EXPLAIN MASONRY CONSTRUCTION TECHNIQUES PECULIAR TO THOSE STYLES

PERFORMANCE OBJECTIVE

Conditions (Given): LEARNER PREPARATION (VIDEO, FIELD TRIP, DEMONSTRATION) AND RESEARCH (LIBRARY, RELATED REFERENCE MATERIAL)

Performance (Task itself): IDENTIFY MAJOR ARCHITECTURAL STYLES IN AMERICAN HISTORY; EXPLAIN MASONRY

Standard (Basis for judging performance): USAGE AND TECHNIQUES FOR SAME

RESTORATION OF HISTORICAL MASONRY FABRIC MUST BE DONE WITH REGARD TO BOND PATTERNS AND STYLES

CRITERION-REFERENCED MEASURE (Evaluation method)

1. REPORT ON MASONRY UTILIZED IN PERIOD ARCHITECTURAL STYLES

2. DUPLICATION OF ARCHES, CORBELS, QUERINS, AND BOND PATTERNS IN LABORATORY

RELATED ACADEMIC SKILLS

1. SOCIAL STUDIES - ARCHITECTURAL HISTORY

2. READING - CONDUCT RESEARCH ON SUBJECT

3. GEOMETRY - LAYOUT OF STRUCTURAL SECTIONS

WHERE TAUGHT

LAB

CLASSROOM

LIBRARY

FIELD TRIP

Excellent

SEP 13 1996

## Architectural Styles/Character

A review of architectural styles reveals a collection of overlapping eras that have definitive features peculiar to each. This unit is intended to help students better understand and appreciate some architectural influences of the past.

This Unit begins with an introduction and discussion of historic styles, and ends with a walking tour of Architectural Styles present in the South Royalton village area.

Not every town or school has such a wealth of historic architecture as South Royalton, but many are close to such a town. A walking tour is an excellent subject for a field trip.

I would also like to say that in some cases, this unit will overlap other units. Activities such as composing and mailing invitations to a walking tour may occur at the same time as beginning a house design incorporating an element of some historic style.

### Some Student Objectives

1. Students will develop a working knowledge of historical architectural styles and their major characteristics.
2. Students will identify architecturally significant houses in South Royalton village.
3. Students will also be able to accurately identify the significant features of those period houses in the South Royalton area.
4. Students will prepare a handout for a walking tour of the historically significant houses for students and invited guests.

South Royalton  
= Any town  
where architectural  
styles are to be found

5. Students will prepare and mail invitations to the walking tour of houses. Student will also write thank-you notes to those who attend.
6. Students will interview home-owners <sup>ad local witnesses?</sup> on the walking tour list for information to be included in the handout.
7. Students will make initial presentations at each dwelling on the tour.

LESSON 1, Classroom Presentation  
and Discussion.

(Estimate 2 - 3 class periods)

**INSTRUCTOR:** Prepare handout on Architectural Styles/Characteristics for students.

Introduce concept of Architectural Styles, and the subject of a walking tour run by the students.

Prepare slides for overhead projector illustrating architectural styles. At least, have some blank slides with some colored markers to help illustrate the discussion.

**STUDENTS:** Participate in classroom discussion, and follow along in the handout.

Draw to the best of their ability, some features of the style that they like the best. Drafting skill is not as critical as the seriousness of attempt to complete drawings of the significant of the style they choose.

Achieve a passing grade of at least 80 in a test of Architectural Style/Characteristics.

*Would an  
out of class  
photo  
assignment work  
too?*

LESSON 3, Survey of Architectural Styles/  
Characteristics

(Estimate 3 class periods)

Instructor: To follow up on the first class discussions, a guest speaker, Mr Euclid Farnam will present a slide show on the Historic Architecture in Vermont. It is not confirmed, but ideally, we would like to have Mr. Farnam accompany us on a first survey of significant historical architecture.

Students, Following up on the discussion, and slide show, the class will survey the village of South Royalton for examples of architectural styles/characteristics. Students will be assigned a 1-page paper on the single Architectural Style/Characteristics that the student most likes. The paper is due in two days.

LESSON 4, Walking Tour Handout

Instructor: Assist students as they work on the handout. Students should do as much of the design and creation of this document. The design and production will be done by the students with the instructor acting as advisor.

Students: Create a handout of the historically significant houses and buildings in the village of South Royalton. In addition to noting the houses and their significant features, the names of the current owners should be noted

LESSON 5, Writing Invitation to  
Walking Tour

(Estimate 2 class periods to write  
invitations, type copy, reproduce  
copies, and mail to addressees.)

Instructor: In this lesson, the instructor and the students will  
&  
Students act more like a committee. Guests for the walking  
tour are more known to the instructor, than the  
students.

Money for the postage and envelopes is in an account  
we have at a local bank for Technology Education.  
We should try to schedule the walking tour on a day  
when the most people will be available.

LESSON 6, Walking Tour of Historically Signifi-  
cant Houses and Buildings in  
South Royalton

Instructor: Coordinate Activities. A table of coffee, hot chocolate,  
and muffins or doughnuts should be available prior  
to starting the Walking Tour.

Introduce the students, and guests to participants  
of the walking tour.

Students; Make initial introductions at each house. They will  
also write and mail thank-you notes to all participants  
in the walking tour.

SUMMARY: At best, each classroom will utilize this unit with a variation of two or three days. Given the wide variety of capabilities, it would be a miracle if any class came in at the days I have suggested.

Somewhere in my professional past, I was told to always build in some spare time to account for absenteeism, holidays, and unforeseen circumstances. With this in mind, disregard any suggested times, and go with your best instincts and forget what I have put down.

I have had some excellent pre-school response from local historical architecture buffs for my planned walking tour. The fact that students are taking part has brought nothing but a positive response from everyone.

To see how well my students take the idea of historical styles and significant characteristics, everyone will have to wait until June of 1997.

Ken Marcus  
South Royalton Schools  
South Royalton, Vermont 05077

Tom,  
Here's my

part of the ~~see~~ <sup>see</sup> not every

I hope it fits - one will be able to use this  
in the same way I intend to

Thanks for a new outlook  
on Architectural  
History -

Ken Marcus

BUILDING TRADES ACTIVITIES AND ACCESSIBILITY TO THE  
HISTORIC ENVIRONMENT

Historic Preservation Summer Institute  
University of Vermont, Burlington, Vermont 05405  
1996

Presented To  
Professor Thomas Visser, University of Vermont  
Judy Hayward, Preservation Institute for the Building Crafts

Ed W. Taylor  
N.H. Dept. of Ed.  
101 Pleasant St.  
Concord, N.H. 03301  
29 Aug. 1996

## Introduction:

The unit: "Building Trades Activities and Accessibility to the Historic Environment" is designed as a rudimentary experience for a high school level Vocational Building Trades Program. It is, of necessity, short in use of class time (One Week) and places limited out-of-class demands on the student. The depth of study for the unit is dependent on the need for information by the class and is influenced by project selection.

While not every Building Trades class will encounter the historic environment, it may well be wise to include some of the information for all classes. Many contractors do perform work on historic buildings and spaces, whether identified as historic or not. The sensitivity developed by direct consideration of historic/accessibility modifications may prove to be a useful activity for anyone in the building trades.

Building Trades is a collective area of study in vocational education. It is generic in that individual programs may include information and practice from several specific trade areas. In some cases, the selection of subject matter is influenced by custom, local unions, labor laws and other factors specific to the locale of the program. Because of this variability, a unit dealing with considerations of accessibility and historic spaces is appropriate in most programs. Electrical, Plumbing, and Masonry are specific examples of specialized areas of Building Trades which are separate programs in some locations, while these are only units in other programs. For this reason, it may be useful to include one or more vocational programs in a common educational experience about historic preservation and accessibility if a historic property is to be impacted by these vocational programs.

Another consideration is that most municipalities in New England do contain historic properties. Frequently some of these are owned by the municipality and/or the school district. These sites may prove to be suitable and valuable for the type of accessibility and historic consideration advocated by historic preservationists. An additional advantage to these projects is the inherent interest and support by the community which can be generated by sensitive planning procedures. The use of a vocational project in this way can raise community awareness and contribute to a community's constructed heritage. Because of the wide interest and the potential for community support, this type of activity may provide a viable and low cost experience which will benefit the community and region for many years.

Unit: Building Trades Activities and Accessibility to the Historic Environment

Estimated Time:

Class Sessions - 5  
Number of lessons - 3  
Trips - 1 (suggested)

Objectives (Unit)

The student will describe the differences among the processes of Preserving, Rehabilitating, Restoring, and Reconstructing as they apply to historic buildings and spaces.

The student will demonstrate an awareness of the need for providing accessibility to historic structures and environments while preserving the integrity of the historic fabric of these places.

The student will describe an acceptable procedure for the design and execution of a project which provides accessibility and preserves historic integrity of an historic property.

The student will demonstrate the ability to consult reliable sources of further information to assist in planning and executing an accessibility project for an historic property.

Learning Activities (Lessons/Activities)

I. INTRODUCTION TO HISTORIC PRESERVATION

- a. Preservation -- Definition and Guidelines
- b. Rehabilitation -- Definition and Guidelines
- c. Restoration -- Definition and Guidelines
- d. Reconstruction -- Definition and Guidelines

Activity

Teacher: present information (guest historic preservationist, video, slide series, field trip, other? )

Student: Listen, watch, tour, find examples in community (out-of-class assignment?)

Resources/Materials

Secretary of the Interior's Standards for treatment of Historic Properties, Weeks and Grimmer, 1995

Various videotapes (US Dept. of the Interior ,etc.)

Various Slide Collections- (Univ. of Vt. Historic Preservation Program, Others)

Preservation Briefs - US Department of the Interior

Evaluation

Tests, Quizzes

Documentation of examples (written, Photo, Etc.)

## Learning Activities

### II. PLANNING AN ACCESSIBILITY PROJECT

- a. Value and right of Accessibility
  - Civil Rights (504)
  - Americans with Disabilities (ADA)
  - State Statutes (Various)
- b. Value of Historic Preservation
  - 36 CFR Part 68
  - Local Historic Preservation regulations
  - Registries (National and some states)
- c. Method and Procedure to Inform an Accessibility Project in an Historic Environment
  - Advisory Committee (Include constituencies)
  - Cost Considerations and Accountability
  - Procedures for Resolution of Conflicts
  - State Preservationist's Office
- d. Alternatives to Common Problems
  - Use of Secondary Spaces
  - Hardware
  - Videography (access to inaccessible spaces)
  - Representative preservation (not all objects/spaces)
  - Ramps, Lifts, Elevators
  - Restroom Considerations
  - Communication considerations (emergency, egress, etc.)
  - Water fountains/ telephone considerations
  - Eating/Dining facilities
  - Other

#### Activities:

- Teacher- Present information, have guests present information, use student research and presentations, etc.
- Student- Research handbooks and guidelines
  - (ADA, UFAS, Etc.)
  - Determine Code Requirements -
    - (Local, State, Federal)
    - Document examples already built
    - Develop plans, prints, or models
    - Meet with planning advisory committee

Resources/Materials

- Secretary's Guidelines and Standards
- Local Building Codes
- Americans with Disabilities Act Handbook  
ADA Guidelines
- Uniform Federal Accessibility Standards  
UFAS
- Architectural and Barrier Free Design Code  
( Appropriate State Codes)

Evaluation (Project Based)

- Develop a plan and Critique
- Analyze an already constructed  
historical accessibility project
- Tests, Quizzes, scrapbooks, Portfolios, etc.

## Learning Activities

### III. DOCUMENTATION OF AN EXISTING STRUCTURE

- Description of what exists (text)
- Videography/Photography
- Sketching, Drawing, and Drafting
- Care of Documentation Artifacts  
(Where, What, How)

#### Activity

- Teacher:
- Show, Demonstrate use of media  
(Camera, Video, etc.)
  - Show, Demonstrate measuring tools  
and instruments as needed

- Student:
- Document existing structure/environment  
(in teams or groups?)
  - Share report of documentation  
with class or others (advisory group?)
  - "Tour" historic site from a wheel chair  
or with other mobility devices and report  
on challenges to accessibility

#### Resources/Materials

- Recording devices for medium  
(Cameras, tape recorders, video, etc)
- Wheel chair and/or other adaptive devices
- Report materials (as developed or existing)
- List of eligible (available) historic spaces

#### Evaluation

- Student demonstration of documentation
- Portfolios, other recorded data, etc.
- Tests/Quizzes, etc.
- Case Studies and analysis?

## Sources of Information

### Preservation Briefs #32:

Making Historic Properties Accessible,  
Thomas C. Jester and Sharon C. Park AIA  
U.S. Department of the Interior  
National Park Service, Cultural Resources  
ISSN: 0885-7016 Sept 1993

The Secretary of the Interior's Standards  
for the Treatment of Historic Properties  
with Guidelines for Preserving, Rehabilitating  
Restoring and Reconstructing Historic Buildings  
Kay D. Weeks and Anne E. Grimmer  
U.S. Dept of the Interior  
National Park Service  
Cultural Resource Stewardship and Partnership  
Heritage Preservation Services  
Washington, DC 1995

Americans with Disabilities Act Handbook  
Published by the Equal Employment Opportunity  
Commission and the U.S. Department of Justice  
ISBN 0-16-033847-7

Uniform Federal Accessibility Standards  
Published by the General Services Administration  
Department of Defense, Department of Housing  
and Urban Development, and the U.S. Postal  
Service

Accessibility and Historic Preservation  
Entrances to the Past  
U.S. Department of the Interior  
National Park Services  
--Captioned Video Tape--  
Run time- 28:25

Various Slide Series may be available from the following individuals:

Professor Thomas Visser  
Historic Preservation Project  
University of Vermont  
(802) 656 0577

Ms. Judy Hayward  
Preservation Institute for the  
Building Crafts  
(802) 674 6752

### Sources of Information

Additional information may be available from Mr. Peter Marsh at the Shelburne Museum, Shelburne, Vt. (802) 985 3346.

### Attached Bibliography

The attached bibliography is included because of its ability to provide additional information. It was compiled by the National Park Service and does not represent work by the present author.

Accessibility and Historic Preservation Bibliography, Compiled by the  
Preservation Assistance Division, National Park Service, 1992.



# ACCESSIBILITY AND HISTORIC PRESERVATION

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Donaldson, Milford Wayne. "Successful Alternatives for Access Compliance." Interiors Handbook for Historic Buildings: Volume II. (Washington, DC: Historic Preservation Education Foundation, 1993).

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"Preserving the Past and Making it Accessible to Everyone: How Easy a Task?" CRM Bulletin. (1991 Supplement).

29 Aug 96

Prof. Thomas Visser  
Historic Preservation Program  
University of Vermont

Dear Tom:

Please let me take this opportunity to thank you for your help <sup>with</sup> my enrollment in the course last summer. Without the help, I would not have had the exposure to your fine program or a very enjoyable and productive experience. Your constant encouragement and that of Judy Hayward was responsible for the pleasant and exciting learning environment. I do wish you well with the program and look forward to its success.

I have enclosed the pictures as I indicated I would last summer. Use them as you see fit - I hope they help. Some of them are of class activities and some are just parts & pieces of your campus. I'm not an architect but I hope there is enough detail for the pictures to be useful. I did concentrate on some aspects of the Science Building (it was the one I chose for the Tues out-of-class assignment) and I was able to get some interior pictures also.

About the Unit of Study - It is rudimentary and that is deliberate. I do not have a particular project under consideration and my use for the unit will be an

advisory one for Building Trade instructors. Each historic project, as you know well, is individual and requires individual consideration of factors which contribute to success. The concept of preservation of historic integrity will dictate (or at least influence) the specific planning for individual projects. I hope I have listed the "Big Ideas" and that it proves to be useful. Any Feedbacks would be helpful.

I have copied the desks for the pictures. They are in Windows (NOT Windows 95) format and I copied the instructions on the yellow paper. Hope these are helpful with the newsletter.

I hope your summer was enjoyable and productive. Your course certainly contributed to mine. Thank you again

Sincerely

Ed Ataylor

**PRESERVATION SKILLS FOR BUILDING TRADES TEACHERS**



*Historic Preservation 202  
Bill Baynham  
Wednesday, August 07, 1996*

# HISTORIC PRESERVATION

## WINDOWS OUTLINE

1. Introduction: What windows do for a building
2. Window styles
3. Glass: a. Where does it come from  
b. How is it made
4. Window parts (terminology): a. frame  
b. sash  
c. joining methods
5. Tools and machines for making windows: a. frame  
b. 19th century  
c. 20th century
6. House styles and windows that help identify them
7. Window evaluation and repair
8. Review and window replacement - how it affects older homes

1. Reasons for Windows

Objective : Students will be able to name four things windows do for a building.

Resources: Classroom, slide projector and screen, slides of local building lumber yards.

Evaluation: Review and oral quiz.

Activities: Class discussion of the reasons for having windows in a building. Read Preservation Brief #9 on the repair of windows. Watch a slide show.



## 1. Windows and What They Do For A Building

My overall goals for studying windows with the class are as follows: Students should be able to verbally demonstrate a knowledge of window terminology and the parts of a window unit. The student should recognize the tools and machines used to make windows and be able to maintain or make simple repairs. Students should understand the changes in technology and window design through the years. Students should understand how windows can change a historic building.

My introduction of what windows do for a building would be a short class discussion to start students thinking about how windows affect a building. I would then ask the students to give me four reasons that windows are important in a building. According to Preservation Brief #9, windows (1) let in light, (2) provide ventilation, (3) provide a link to the outside, and (4) enhance the appearance of a building.

At this point, I would ask the students to start thinking about how these four points can strongly enhance or subtract from a building. Under ventilation, for instance, I would bring up the topic of energy use and comfort and how windows effect both. Another important topic to discuss is how window size, fenestration and style dramatically affect the appearance of a building. In the conclusion of this discussion I would show the students slides of buildings around town that they are familiar with. I would ask the class to concentrate on the different types of buildings and to imagine those buildings with different windows.



## 2. Window Styles

**Objective:** Students will be able to name different window types - double hung, single hung, fixed sash, bay, bow, awing, sliding, hopper, eyebrow.

**Activities:** View slides, look at class window displays, go on a field trip to a home center to view different types of windows, study and memorize window style handouts, and go on a walking tour to view different style windows.

**Resources:** Home center and tour guide, slides of local houses, window display and walking tour to look at windows.

**Evaluation:** The students will be given a written quiz on window types.

## 2. Window Styles

The objective for this section is for the students to remember and be able to name the different window types. Many of the window manufacturers, Brosco for example, give away free manuals. Ideally each student would have their own manual. This type of brochure gives many examples of each window style and the students would be able to see all the variation available.

Lumber yards usually have a selection of different windows in stock. This would be an excellent and easy field trip so that students could visualize the different sizes and styles of windows. While talking about window styles, I would ask students to be aware of the advantages and disadvantages of the different styles. I would point out the amount of wind seal area on a double hung window as compared to a casement window. I might also point out the difference in locking mechanism, and how a casement pulls the sash tight to the jambs. I would discuss which of the different styles of double hung or casement is the most efficient.

The windows I would have the students memorize would be the most common - double hung and casement. The student should also be able to remember and identify sliding windows, awning, and hoppers. Students should know the difference between a bay window and a bow window.

### 3. History of Glass Making

**Objective:** Students will understand how glass is made. Students will be made aware of the history of glass making and understand the changes time has made in glass technology and production.

**Activities:** The students will view a video on the history and manufacturing of glass. Students will visit a local glass shop, Portland Glass, and go on a field trip to see Simon Pierce of Windsor, VT., manufacture and blow of glass.

**Resources:** Video, guest speaker, and glass shop owner, and professional glass blower and manufacturer of glass.

**Evaluation:** The students would submit a written report on the what they learned on the field trip.

### 3. Glass

At the beginning of this topic, I would trace the history of glass making. Begin a class discussion on (1) when glass was first made and (2) how glass is made. After a ten minute discussion I would show a film on glass making by Corning which traces the history of glass making and the technology and changes involved in this skill. My objectives during this topic would be to have the students understand that glass has been made for thousands of years. The class would place emphasis on the technical advances in glass making.

After an initial introduction and the film, the class would concentrate on glass manufacturing in the United States. We would discuss the colonial period and the import of glass from Europe. I would discuss local glass making on a small scale in colonial America and talk about the glass works area in Burlington.

While discussing changes in glass technology I would talk about the changes in glass size over time.

#### 4. Window Parts Terminology

**Objective:** At the end of the lesson students will be able to identify parts of a window.

**Activities:** The students would study handouts and overheads of double hung window breakdown. They would look at and memorize parts identified on a window display, and view a *Home Time* video on windows. The different views and parts of windows will be discussed.

**Resources:** Window displays, parts identification handout.

**Evaluation:** Quiz on window part identification.

#### 4. Window Parts Terminology

There are dozens of different parts to a window unit. It is important that the student be able to accurately identify and describe all of the elements which make up a window. Ideally, for this topic you would have a display of several different window types, including a double hung and a casement window. It would be ideal to have a newer double hung clad unit and an older double hung wood sash to compare. I would break the window identification down into two separate sections, one section for the sash and the other section to include everything else. Index card all the parts and fold the index cards over and number the outside of the card. Quizzes or assessments are easily done orally with the index cards.

By having a few different unit displays, students can easily compare double hung versus casement. The class can also get a feel for how units are manufactured or built. At this point I would talk about joining methods.

Under the topic of window parts and terminology it should be easy to work in discussions on changes in technology. If you have an old window unit you could compare weather stripping to a newer display. Vinyl or aluminum cladding could be discussed, as well as insulated and low E glass technology. This would also be a good time to point out to the class that in general, new windows are more efficient. Thermopane and low E glass give a better R value than single glazing. Also, newer windows usually have better weather-stripping and leak less air than older units. Older units, however, often function adequately and have advantages over some of the newer units. Older window units were often larger than newer windows because people depended on them more to let light than in newer homes. Also, older window units were often better constructed than their modern counterparts. Older units used heavier frames and jambs. The sashes were thicker and heavier. Mortise and tenon joints were often used in construction



rather than steel fasteners. Older window units were also more intricate or ornate than the plain units being sold today.

In conclusion, the main emphasis on topic four is to have students have the knowledge to be able to break a window unit down into different parts and to identify and name each of the parts.

## 5. Tools and Machines to Make Windows

**Objective:** Students will be able to identify the hand tools, hand-held power tools and stationary power tools used to make windows.

**Activities:** Museum field trip to view a hand tool collection. View a video of major window manufacturer *Anderson*. Field trip to window builder or cabinet workshop. Students will view handbooks from text books. They will use hand tools: bench planes, molding planes, and hand saws. Students will also use hand held power tools (router) and stationary power tools (table saw and shaper).

**Resources:** Students will visit a museum with carpentry hand tools. The students will also visit a wood working shops.

**Evaluation:** Students will have a hand-on approach to the tools used in window making. Students will be given a quiz on the identification of tools.



## 5. Tools and Machines to Make Windows

The purpose of this section is two-fold. The first is for students to understand the changes in windows over time due to the changing technology. The second purpose is the teaching and identification of the common tools and machines used to make windows.

This section would be separated into three categories; 18th, 19th, and 20th century technology. This would make it easier to show the changes in the tooling used in each of the three centuries. For the 17th century I would bring in molding planes, bench planes, mallets and chisels. The students could practice making heads with the molding planes. The instructor could demonstrate cutting a mortise and tenon joint for a stile and rail of a window sash. A hack saw and molding gauge could be used to layout and cut the mortise. The tools for this demonstration are commonly available and it would be an inexpensive workshop. It would be a fun and hands-on way for students to get involved in the understanding of the effort and skill required to produce finished items in a pre industrial era.

It would be my goal, using the 19th century, to show students how industrialization affected the manufacturer of goods. Water, power, and later, engine and electrical power led to the use of large industrial machines and assembly line manufacturing methods. Workers were no longer building a window by hand from rough lumber to a finished product. Now workers were responsible for one or two manufacturing methods and worked a long shift in a factory. For example, a worker might feed rails through a shaper all day long, and do nothing else.

In this section I would want to make students aware of how industrialization led to a tremendous increase in the output of parts of products, such as windows, so that they were as efficient as possible to make. I would discuss with the class the machines, such as the cast iron power tools, used in this period. Machines such as large 24" thickness planers, 16" long bed jointers, 14" and 16" table saws and chain mortises. The students would be aware that the

machines used at the end of the 1800s do not look much different from the tools seen in high school shops and technical centers today.

I would conclude this section by introducing the students to the changes in technology and machinery which occurred in the last part of the 20th century. Today the machinery used to make windows in a modern factory looks as similar as comparing a molding plane to a scraper.

The machines I would discuss would be CNC routers used to cut out parts, CNC maligning centers used to route parts, drill and groove, edge foilers and profile foiling machines which can make a piece of MDF or particle board molding look exactly like red oak, walnut or mahogany. I would talk about the high speed hydro moulders which store up to 100 patterns in their memory. Another piece of machinery I would discuss would be the European window manufacturing centers. There are combination machines which provide four-sided straightening and planeing of rough boards to dressed lumber in one pass. They also have a small double-ended tenoner and a multiple spindle moulder as part of the machine. The net result is that rough lumber is loaded into one end of the machine and on the other processed stiles and rails exit. These types of machines have allowed manufacturers to come full circle in the making of windows. Now it is possible for small manufacturers to produce custom windows with minimum down-time or machinery set up.

6. House Styles and Windows That Help Identify Them

**Objective:** Students will be able to identify seven different house styles. They will be able to describe the window details of each of the seven houses.

**Activities:** Students will study a handout of house styles and a handout of windows which identify the house styles. Students will view slides of local houses and participate in a walking tour.

**Resources:** Slides and house style handout. Text - McAlester. *A Field Guide to American Houses*.

**Evaluation:** Identification quiz on house styles.

## 6. House Styles and Windows That Help Identify Them

Obviously, many different house styles have similar windows. Windows can, however, hint or help define what style a particular house is. In this section I would use slides and a walking tour to show how windows can give a clue as to the style of a particular house.

Federal - The first house style would be the Federal. The ideal window to point out for this house style would be a Federal Fan light over a door. Students would be able to identify a Federal Fan light. I would explain to the students that this window type goes into many different house types.

Greek Revival - The next house style is the Greek Revival, and I would point out the side lights around a door. These windows are usually long and narrow. This house style features windows that extend nearly to the floor. These windows are also tall and narrow and would mimic the opening between columns in a Greek temple.

Gothic Revival - The identifying window of the Gothic Revival house style is the lancet window. It is a narrow, tall window with a pointed top. This style was to mimic a medieval sword or lance.

Colonial Revival - This style often had double hung windows that were often mullionm rather than being a single unit. Glass sizes were often smaller than the Federal or Greek styles. Colonials often had palladian windows that were in larger scale than they had been in previous styles.

Italianate - Windows in this style are double hung two-over-two with large lights. The windows would often be paired or triple, and have rounded or arched crowns and castings.

Queen Anne - Windows tend to be simple, a sash window with one pane of glass. Stained-glass windows and a glass-stained stairwell light belong in a Queen Anne. These stained-glass lights were usually placed at a stairwell landing to add light to the stairs. They were also commonly placed at a midpoint landing, placing a window between two floors.

7. Window Evaluation and Repair

Objective: Students will be able to identify the three different types of window repair.

Activities: Students will view and evaluate old windows, and they will read Preservation Brief #9 on window repair. All students will participate in the hands-on activity of stripping, sanding and repainting an old window.

Resources: House repair or preservation project. Handout Preservation Brief #9.  
Old window sash or frames.

Evaluation: Work on window repair. Students will name classes of window repair from Preservation Brief #9.



## 7. Older Window Evaluation and Repair

Now the window knowledge students have gained in the previous sections will be useful in this section which concentrations on evaluating and repairing historic windows. A knowledge of window part terminology, energy efficiency, tools, and machinery are building blocks for window repairs. The class has gone on a field trip to a lumber yard and priced new windows. This should make students aware that it often makes great economic sense to repair rather than replace old windows.

This section is based on Preservation Brief #9 for the repair of historic wooden windows. I would begin with window evaluations. The class would check the condition of a single unit or all the windows in the project. A window schedule can be introduced at this point, so students can map the condition of various windows. The condition of the window should be noted. It is also advisable to determine what, if anything, led to the deterioration of the window. This is the investigative area of restoration. Was the window properly maintained? Was there structural failure in other parts of the building which led to the damage? Rotting sills or missing gutters might contribute to window damage. Have students check for wood rot with an ice pick.

Students would then begin three classes of glass repair from Preservation Brief #9. Students could remove paint from a window frame, practice removing stops, parting bead and sash. Repairing a sash, fixing broken window panes, and reglazing are all skills within a student's range of repair. Finally, the window would be weather-stripped and repainted to like-new condition.

Major points the students should grasp would be in this section. The first is that routine window maintenance can save large amounts of money and avoid major repairs. The second is that although a window may appear to be in very bad condition, it can usually be restored with proper evaluation and the proper repair. The last major point is that window repair is usually

labor intensive, but there are not many material costs involved. So, by using your own labor you can save a considerable amount of money over the cost of new windows.

It is important to discuss lead paint and the associated health hazards when teaching window repair. All old windows which haven't been stripped of paint would have lead paint on them. Personal protection and how to safely strip the paint need to be discussed.

Lastly, I would bring up Section 106. Section 106 states that the use of federal funds should not have an adverse impact on historic buildings, encouraging the repair of older windows rather than replacing them with newer windows.

8. Window Replacement and How it Affects Older Homes

**Objectives:** Students will understand some of the reasons people replace windows in older homes. Students will know the cost of materials and labor to replace individual window units. Students will appreciate how certain window types fit with older homes.

**Activities:** Students will analyze window replacement cost and calculate the labor involved and the cost pay-back in energy savings. The class will view slides of remodeled houses with new windows and participate in a walking tour of houses with original windows and houses with replacement windows.

**Resources:** Window and labor cost guidelines, slides of appropriate houses. Area for appropriate walking tour.

**Evaluation:** Price house example with replacement windows. Figure number of year pay-back in energy savings.

## 8. Window Replacement: How It Effects Older Homes

This section would be a review and would bring together all that the student has learned in previous sections. I would re-emphasize how window design effects house in four ways. A window provides ventilation, lets in light, provides a link to the outside and enhances the appearance of a building. Therefore, "throwing new windows" into a building can have some serious effects on any of these four things.

I would discuss mass marketing by big corporations. Does it make sense to replace serviceable 50-year-old windows with new thremopane units because they have a R-3 rating or they are low E? New double hung windows cost about \$300 per unit plus installation. At an installed cost of \$500 per unit, how many gallons of heating oil would have to be saved in order to get your money back? How long would the pay-back be if you replaced every window in the house? Are there any less expensive ways to save energy?

How does replacing windows in a historic building change the look and feel of the building? *Old House Journals, Remodeling* and a walking tour of an older neighborhood can show the disastrous effect careless replacement can have on an older home.

## WINDOWS

<i>House Style</i>	<i>Window Style and Sash</i>
1st Period	Leaded casement, small lights, diamond shaped.
Colonial Revival	Double hung larger paned, palladian window.
Federal	Double hung, larger panes, Federal Fan light.
Georgian	Double hung, 12/12 small panes.
Gothic	Pointed top, lancet windows mimic sword.
Greek Revival	Long side lights on doors. tall windows to mimic column openings.
Italianate	Curved top or window head and arched top sash, two over two.
Queen Anne	Stained glass window, stairwell landing window.
Shed	Fixed sash single pane, thermopane.

## WINDOW PARTS AND TERMINOLOGY

Sash	Moveable portion of the window or the frame that holds the glass.
Jambs	Frame which surrounds the sash.
Rail	Horizontal portion of the sash, goes between the two stiles.
Stiles	Vertical outside pieces of the sash, goes from top to bottom.
Meeting Rail	The lower rail of the upper sash, the upper rail of the lower sash where the two sash come together in a double hung window.
Light	Individual panes of glass in a window unit.
Muntins	The slender vertical and horizontal bars in a window which hold the in place.
Guilles	Fake muntin bars used in modern windows to make the unit look like it has true divided lights.

Mullion	When two or three double hung windows are installed next to each other, the vertical bar between the units. Therefore, two double hung units put together are called a double mullion and three would be a triple mullion.
Glazing, glazing points	Metal spikes put in the muntins and sash to hold the lights in place - glazing compound weather seals the lights in the sash.
Sash cord, sash cord weights	The rope and counter weight balances used to overcome the weight of a double hung sash. The weight makes it easier to open the window sash.
Parting bead	The wooden strip between the upper and lower sash of a double hung rail. The bead lets the window go by one another.
Stop	Holds the sash in its channel and keeps it in place.
Jambs, head and sides	Frame which the sash sits in.
Jamb liner	Usually vinyl or aluminum insert put up against wooden jambs. Liners hold the sash in place and help keep the window weather tight.

Sill	The lower horizontal frame which the side jambs are attached to. The sill is usually beveled 5 degrees on the outside so that the water drains away from the window.
Stool	Interior horizontal trim member nailed on the top of the sill and sits up against the lower sash. The stool is usually rounded over and extends out from the casing.
Casing, side and head	The casing is the exterior or interior trim surrounding the jamb. The head casing is the piece which goes on the top. Casings can be either simple or intricate, depending on the window.
Apron	The interior trim piece which goes horizontally under the stool.
Storm sash	Exterior storm window.
Triple track	Aluminum combination window which houses screens and storm windows in a three-track channel.
Weep holes	Small drainage holes at the bottom of triple track or storm units that allows for the escape of moisture.
Single glazed	A window unit which is one piece of thick glass.

Thermopane

A unit which is two or more pieces of glass thick with an insulating space between the two panes of glass.

Low E

Low emmissivity glass, a film laminated to the glass which reflex radiant heat waves.

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Wagner, Willis H. *Modern Carpentry* Goodheart and Willcox Company, South Holland, Illinois.

*Excellent*

# SLATE

HP 202  
PRESERVATION EDUCATION SKILLS FOR BUILDING TRADES TEACHERS  
HISTORIC PRESERVATION SUMMER INSTITUTE July 8 - 12, 1996  
Instructors: Thomas Visser and Judy Hayward

Steven C. Sebastian  
Southeastern Vermont Career Education Center  
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## **SLATE ROOFING**

While the scope of this unit is roofing, I will concentrate on slate roofing to demonstrate the integration of treatments for historic buildings into the Construction Trades program.

### **I. UNIT: ROOFING**

- A. FUNCTION AND STYLES OF ROOF SYSTEMS
- B. ICE DAMS
- C. FIBERGLASS / FELT SHINGLES
- D. METAL ROOFING
- E. WOOD
- F. SLATE ( 5 class periods of 40 min. for slate )

### **II. OBJECTIVES: F. - SLATE**

- A. History of slate in the local area.
- B. Identify the qualities, appropriate application and cost of slate systems.
- C. Identify the names of slating tools and list the function of each.
- D. Describe installation procedures for slate.
- E. Describe a repair method for slate.
- F. Describe how the historic character of a structure can be altered by the removal of a slate roof.

### **III. LEARNING ACTIVITIES**

#### **A. Teacher directed activities**

1. Discussion / lectures on the qualities, cost and history of slate.  
*MATERIALS*  
*samples of slate shingles*  
*slides of local slate roofs*
2. Demonstration of slate installation and the use of specialized tools.  
( can be presented by a guest slate roofer )  
*slate shingles*  
*slate cutter*  
*slate hammer*
3. Lecture on repair vs. new roof
  - a. preserving historic fabric
  - b. cost benefit
  - c. durability of repaired slate roof*slides of buildings*
4. Demo on slate repair.  
*mockup of slate roofing*  
*slate ripper*

B. Student centered activities

MATERIALS

1. Students will practice slate layout pattern.

*1/4 sq. of slate (slate need only be placed on a flat surface)*

2. Students will practice cutting slate.

*scrap slate*

3. Students will practice punching nail holes in slate.

*scrap slate*

4. Advanced student activities - for extra credit or independent study in History / Construction Trades.

- a. Fabrication of demo slate roof to be used in the lab.
- b. Repair slate on a demo slate roof.
- c. Coop with a local slate roofer.
- d. Interdisciplinary research project with joint credit in History and Construction Trades.

Research the following for a historically significant structure with a slate roof:

- the historical significance and or past uses of the structure.
- the current use of the structure.
- the building style.
- any major additions or changes to the structure.
- the history of the roof (repair or replacement).
- the current historical status.

*Might teach to science teacher re: written geology as well. For a science project or extra credit.*

IV. RESOURCES / MATERIALS

SLATE: Slate can be purchased from any slate supply company in your area or from the slate companies listed below. However, broken, used or unsound slate may be obtained from roofers or slate companies at little or no cost.

TOOLS / SLATE:

Evergreen Slate Company, Granville, New York 12832  
<http://www.evergreenslate.com/>

Hilltop Slate Company, Middle Granville, NY 12849

New England Slate Company, Burr Pond Road, Sudbury, VT 05733

Rising and Nelson Slate Company Inc., West Pawlet, VT 05775

Taiko Bros. Slate Company, Middle Granville, NY 12849

Vermont Structural Slate Company, Fair Haven, VT 05743

Brown and Roberts Hardware, 182 Main Street, Brattleboro, VT 05301

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--- "Substitute Roofing - Credible Stand-Ins for Clay Tile, Slate, and Wood." Vol.11, No. 3 (April 1983), pp. 61-63.

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## VI. EVALUATION:

### A. Unit written or oral test

1. List local historical sources of slate.
2. List the advantages and disadvantages of slate as a roofing material.
3. Identify the historical significance of slate roofing.
4. Describe the correct use of slate tools.
5. Describe one installation procedure for slate.
6. Describe one repair method for slate shingles.
7. Describe of how the historic character of a structure can be altered by the removal of a slate roof.

### B. Demonstrate the ability to cut and nail slate.

### C. Demonstrate a correct installation pattern for slate.

TOOT  
THANKS FOR ALL  
YOUR WORK.  
THE SUMMER  
INSTITUTE WAS  
GREAT  
STEVE

# THE TIMBER FRAME

Submitted by STEWART OLSON

TO

Preservation Education Skills for  
Building Trades Teachers

Historic Preservation Summer Institute  
University of Vermont

Instructors:

Thomas Visser, University of Vermont  
Judy Hayward, Preservation Institute for the Building Crafts

## TABLE OF CONTENTS

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Definition and Brief History -----	4-7
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## OUTLINE of COURSE CONTENT

History; Integrate this Unit with other History classes offered in the school.

Time Line, BC

AD early

Medieval

Old World

New World, Colonies

Westward Expansion 1800's

Revival of the timber frame to present

Activities for this Unit; Video, *Timber Frame*, *The Complete Video*

Model building of Historical buildings or Architectural features

Field trip to Historical building sites

Architectural Style,

Greek, Similarities to wood counter parts

Tudor, Scarcity of timbers

Evolution of floor plans and exterior style changes

Adaptations of interior timber style and decoration

Saltbox, Cape, Two-Story Colonial, Gambrel

Federal, Georgian, Greek Revival

Activities for this Unit; Video of Greek Historical sites

Create Tudor Model, Create Stucco

Design floor plan of St. Gall

Field Trip to Historical site

Construction Methods, Frame evolution and heritage  
Integrate this Unit into related Math Classes

Layout, Scribe and Square Rule methods

Bents

Girts

Plates

Purlins

Braces, Knee Braces

Trusses

Post types, Flared, Tapered, Gunstock, Truncated, Embellished

Evolution to Stud Construction

Jetties and Overhangs

Barns, English Style, Dutch Style

Activities for this Unit; Design Timber Frame Structure

Engineer Trusses and Test Strength

Joinery, History, experience and evolution of joints

Lap Joint

Mortise and Tenon Joint, Importance

Types, Open

Diminished Haunch

Housed

Through, extended

Double

Shoulder

Square and rectangle

Dovetail, Lap

Wedge

Rafter Seats

Floor Joists, Dovetail

Notched, Beveled, Adzed

Housed

Soffit Tenon

Splicing Timbers, Half Lap, Scarf, Scarf Variations

Tying

Activities for this Unit; Create various joints and test for strength

Wood, Growth This Unit can be integrated with Physics, Biology classes.

Strength, Shear, Tensile, Compression, Tension

Related to Wood Defects, Knots, Shake, Spiral, Cross Grain,

Crotch, Reaction, Wane, Stain, Decay, Insect Damage,

Splitting (Checking), Shrinkage

Bending

Horizontal Shear

Deflection

Specifications

Species, Hardwoods, Softwoods

Cutting, Time of Year

Sawing, History

Pegs, Wedges

Activities for this Unit; Work with various types of Wood

Field Trip to local Historical sites

Working Wood, History of Tools and Uses

Felling, Hewing

Tools and Tool Safety

Axe, Broad axe, Adze  
Layout, Scoring  
Saws, Chisels, History, Old, New, Hand, Power  
Draw knife  
Spoke shave  
Mallets  
Slick  
Planes  
Drills, Boring, Hand , Machine  
Sharpening Techniques, Skills, Materials  
Raising, Hand, Machine

#### Preservation and the Timber Frame

Style, Architectural  
Dating, Dendro Chronology  
Wood Identification  
Peg Style, Material  
Joint types  
Identification of Deterioration, Rot, Insect, Weather, Poor Material Use  
Settling, Foundation  
Stabilization  
Rehabilitation, Restoration, Reconstruction

Activities for this Unit; Take bore samples of old timbers

Study fungi  
Work with local Historical Society  
Field Trip

## UNIT I      TIMBER FRAME HISTORY

Definition: Timber Frame; A building, ( barn, house, shed or structure ) with an internal frame constructed of large timbers, the largest usually being posts, or uprights, and beams, horizontal members, connected through interlocking joinery to produce stability to the posts, with diagonal members called braces to provide rigidity to the frame.

Timber Frames are referenced in earliest recorded history, first around the time of the birth of Christ. Early Egyptian pyramid builders used timber frames and references in the Bible record King Solomon's Temple using the Cedars of Lebanon for framing. Early Scandinavians used log structures with posts and carved decorative elements. Early known stone structures such as Greek temples and the Parthenon are created of elements which resemble wooden structures ie. columns, round and tapered like tree trunks, architraves or fascia, spanning columns are beams, triglyphs, resemble the ends of timbers placed on beams to support flooring, these stone structures provide archaeologists with more historic information because wooden structures predating stone were subject to centuries of fire, war, rot and weathering, leaving little evidence. The scholar Vitruvius described the Temple of Ceres as constructed of *opus craticiom*, or timber framing. The earliest forms of timber framing evolved from poles tied together and wrapped with skins, these being the homes of nomadic people. As settlements became permanent, timber structures became more stable and durable, with wooden joinery and fastenings. The development of the mortise-and-tennon joint between 500 B.C. and 200 B.C. was a significant step in the evolution of timber frame construction by advancing the technology to join various pieces together. Self-supporting structures were developed around the 10th century, which gave frames a lasting quality because they were then protected from the conditions of deterioration, ground contact provided,

previous to this posts were supported in dug holes and compacted with earth. Northern Europe provided vast supplies of timbers for building, some primeval forests trees were 200 feet tall and could be fashioned into many uses, however by the year 1200, in England it was a hanging offense to cut trees without a permit, do to over cutting. At this point in time the use of masonry was seen as in-fill to take the place of wood which lead to the development of the Tudor style. We also see the development of the cruck-framed house and the use of shorter and crooked timbers, most often cutting timbers lengthwise and using them as pairs. This shortage of material influenced many European styles such as jetties and overhangs, as well as restricted the better materials to the wealthy class. As America was settled the abundance of timbers allowed for more flexibility in construction. New England weather also influenced design, exposed frames were now sheathed to provide insulation and houses were designed around a central chimney to conserve heat. The basic design was a parlor and a hall for the first floor and the second floor was two bedrooms on either side of the chimney, later when families became more prosperous a lean-to was added to the eave side creating the saltbox style. Builders previous to the 1600's had few secrets as to joinery but in Europe during the Guild system the competition to out do one another was prevalent. The guilds created the master and apprentice which improved the craftsmanship of the carpenter. The carpenter or housewright protected the secrets taught by the master and the quality standards were kept high which was how the reputation of a certain builder would be maintained. These standards were brought to the New World but two things now changed the nature of timber framing, capitalism and the abundance of virgin forests, frames could expand and were commonly over built, maybe because of the uncertainty of the climate, also because of the materials available. Timber framing was the standard of building construction until the mid 1800's. With the advent of the powered circular sawmill, stud framing now became the framing of choice do to the easy of construction and labor, as

well as the knowledge of the carpenter to design and cut complicated frames was no longer necessary. Studs for construction were more transportable as well as the sawmills to cut them, and followed the westward expansion by rail.

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Journals from The North American Timber Framers Guild  
P.O. Box 1075  
Bellingham, WA 98227  
360-733-4001

## **TOOL SUPPLIERS**

Woodcraft Supply Corp.

41 Atlantic Ave., Box 4000  
Woburn, MA 01888

Fox Maple Tools  
Box 583, Snowville Rd.  
West Brownfield, ME 04010

Iron Horse Antiques  
RD #2  
Poultney, VT 05764

### **STRESS-SKIN PANEL INSULATION SUPPLIERS**

Advance Energy Technologies, Inc.  
P.O. Box 387  
Clifton Park, NY 12065  
518-372-2140

Advance Foam Plastics, Inc.  
5250 North Sherman St.  
Denver CO 80216  
303-297-3844

Affordable Luxury Homes  
Hwy. 224  
Markle, IN 46770  
219-758-2141

Alkhem Inc.  
3617 Strawberry Rd  
Anchorage, AK 99502  
907-243-2177

Andrews Building Systems  
225 S> Price St.  
Longmont, CO 80501  
303-772-3516

Atlas Industries  
6 Willow Rd.  
Ayer, MA 01432  
1 800-343-1437

Big Sky Insulations, Inc.  
P.O. Box 838  
Belgrade, MT 59714

406-388-4146

Branch River Foam Plastics  
15 Thurber Blvd.  
Smithfield, RI 02917 401-232-0270  
Foam Plastics of New England  
P.O. Box 7075  
Prospect, CT 06712  
203-758-6651

Low-Temp Engineering, Inc.  
308 East Main St.  
Route 123  
Norton, MA 02766  
617-285-9788

Northern Energy Homes Inc.  
Box 463  
Norwich, VT 05055  
802-649-1348

NRG Barriers, Inc.  
61 Emery St.  
Sanford, ME 04073  
207-324-7745

Pond Hill Homes Ltd  
Westinghouse Rd.  
RD4, Box 330-1  
Blairsville, PA 15717  
412-459-5404

Winter Panel Corp.  
RR5 Box 168B  
Brattleboro, VT 05301  
802-254-3435

## **VIDEO**

Timber Frame  
The Complete Video      Cost \$28.00  
North American Timber Framers Guild  
P.O. Box 1075  
Bellingham, WA 98227  
360-733-4001

Timber Frame                      Cost \$23.00  
The Barn Raising 1929  
North American Timber Framers Guild  
Bellingham, WA 98227  
360-733-4001

## **ASSOCIATIONS**

Timber Framers Business Council  
Washington, D.C.  
202-783-1100

North American Timber Framers Guild  
P.O. Box 1075  
Bellingham, WA 98227  
360-733-4001

## BUILDING OR EXHIBIT MODIFICATION PROPOSAL

- Date: November 1, 1993
- Building: Blacksmith Shop
- Proposed change: Installation of a motor for a 1920 electric trip hammer
- Area: Partition wall north of the forge
- Justification: This type of equipment would commonly be found in blacksmith shop during the transitional period between the horse-drawn vehicles and motorized vehicles. The trip hammer motor and belt assembly can be secured to the beams using bolts already in place and with a minimum of impact on the historic fabric of the building. A sign in the shop explains that most of the tools and equipment in the blacksmith shop came from other shops so the trip hammer will not be perceived to being original to the shop.
- Analysis: The beams that the trip hammer motor are will be secured to are believed to be original to the shop. However, there is a angle bracket secured to the beams which has bolts that cold help secure the motor mount with only one or two other bolts being necessary.  
During the summer of 1993, the trip hammer was mounted in the Blacksmith shop. Floor boards were removed to storage in the shop attic. A concrete pad was poured and the trip hammer bolted to it. Replacement floor boards were cut and installed.
- Alternate options: The trip hammer motor could be mounted on a sel-supporting wood framework which would eliminate any need to secure the motor mount to any part of the building. However, this mounting would be atypical and could be misleading. It was felt by Peter Marsh, (B&G), Eloise Beil (Coll.) and Cathy Wood (Educ.) that the advantages of not having to secure the morot mount to the building were out weighed by concern over having a large framework constructed and mounted in the Blacksmith Shop that would be purely an expedient means to avoid securing the motor mount to the beams.
- Work performred by: B&G Carpenters and painters working in conjunction with Peter Wells
- Documentation: Before and after B/W photos (Archive location?)
- CC Notification: Protection services  
Collections  
Education  
Building archive file  
B&G building file

## HISTORIC PRESERVATION GUIDELINES

1. Historic buildings and those gallery or exhibit buildings that could reasonably be perceived as historic will use the Secretary of the Interior's standards for historic preservation projects to guide work done on or in the buildings.
2. All building fabric should be treated as original material unless there is documentation or a significant body of evidence to indicate it is not .
3. Any proposed modifications to historic buildings or exhibits relating to the history of the buildings must be justified and documented with at least the following information:
  - Building name
  - Area or exhibit
  - Justification (options considered, reasoning behind the proposed change and why other options were rejected,)
  - Analysis: date of material or exhibit
  - effect of modification on perception of the historic nature of the building or exhibit
4. Acceptable reasons for significant changes to buildings or exhibits
  - Visitor or staff safety
  - Building preservation
  - Laws or regulations
  - Significant enhancement of interpretation or visitor experience
5. Museum staff need to record of work done on buildings and exhibits including:
  - the reasons for the work being performed and a record of options rejected with the reasoning involved.
6. A building and/or exhibit modification form should be developed to provide a format to record the information mentioned above.

## HISTORIC PRESERVATION GUIDELINES

### TYPICAL QUESTIONS FOR WHICH WE NEED GUIDANCE:

1. Should historic houses be kept unpainted, artificially old appearing?
2. How can we justify not installing a ADA access to Prentis or Stencil?
3. To what extent should we preserve extant materials in repairs?
4. Should the triphammer be attached to the walls in the Blacksmith, suggesting that it was once part of the original building?
5. Should exterior louvre vents be installed in windows of historic houses?
6. Can cedar shingles be replaced with asphalt roll roofing on Shaker Shed north roof?
7. How do we explain/interpret the stocks & pillory, wells, etc.?
8. Would paving be an acceptable road surface?
9. Are rain gutters acceptable for Sawmill and Sawyers Cabin, though not appropriate for period or style?
10. Should the Prentis "Birthing Room" interpretation be replaced by the understanding that it was once a pantry?

# SHELBURNE MUSEUM BUILDING CLASSIFICATIONS

## HISTORIC BUILDINGS INTERPRETED AS SUCH

General Store	Prentis	Dutton House
Stencil House	Sawyers Cabin	Castleton Jail
Blacksmith Shop	Covered Bridge	Meeting House
Private Car	#220 Locomotive	TICONDEROGA
Schoolhouse	5-hole Outhouse	Stone Cottage

## HISTORIC HOUSES INTERPRETED AS GALLERIES

Dorset House	Stagecoach Inn	Variety Unit
Lighthouse	Round Barn	Shaker Shed

## GALLERY/EXHIBIT BUILDINGS PERCEIVED AS HISTORICAL

Horseshoe Barn	Horseshoe Barn Annex	Weaving Building
Print shop	Beach Lodge	Beach Gallery
Hat & Fragrance	Railroad Freight Shed	Sawmill
Smokehouses	Railroad Tool Shed	Wells
Vermont House	Apothecary	Stocks & Pillory

## NON-HISTORIC GALLERY/BUILDINGS

E. H. Webb Memorial	Webb Gallery	Pleissner
Circus Building		

## HISTORIC VISITOR SERVICE/SUPPORT BUILDINGS

B&G Truck Garage	Norton House	Cole House
Norton Barn	Diamond Barn	

## NON-HISTORIC VISITOR SERVICE/SUPPORT BUILDING

New Storage	Conservation/Paint shop	Exhibit Prep
Education Wing (Cole)	Carpentry/Plumbing Shops	Toll House
Missile Base	Cole House Shed	Cafeteria
Owl Cottage		

10/11/93 B&G: Buildings

T. Visser

HP 202 (60167)

**DEPARTMENT OF HISTORY COURSE EVALUATION**

Course Number HP 202 - BUILDING TRADES / CODE: 60167

Instructor VISSER/HAYWAED

Fall/Spring/Summer 19 96

Please take a few minutes to give us your assessment of this course. The Department of History uses course evaluations in its annual review of each faculty member. In addition, the instructor will use the results as an aid to the improvement of instruction.

I prefer not to answer the following questions \_\_\_\_\_

Questions 1 - 10 should be answered using the following scale:

- [1] strongly agree
- [2] moderately agree
- [3] neutral/uncertain
- [4] moderately disagree
- [5] strongly disagree
- [6] not applicable

- 1 1. The goals of this course were clearly presented.
- 1 2. The lectures were well organized and instructive.
- 2 3. The readings complemented and enhanced the course.
- 1 4. The written assignments and examinations were fair.
- 1 5. I would recommend this course to other students.
- 6 6. The grading was fair.
- 1 7. The instructor was accessible and helpful.
- 1 8. The instructor was enthusiastic and knowledgeable about the subject.
- 1 9. The instructor encouraged questions and was open to suggestions.
- 1 10. I would recommend this instructor to other students.

# DEPARTMENT OF HISTORY COURSE EVALUATION

Course Number HP 202 BUILDING TRADES CODE: 60167

Instructors T. VISSER & J. HAYWARD

Fall/Spring/Summer 19 96

Please take a few minutes to give us your assessment of this course. The Department of History uses course evaluations in its annual review of each faculty member. In addition, the instructor will use the results as an aid to the improvement of instruction.

I prefer not to answer the following questions \_\_\_\_\_

Questions 1 - 10 should be answered using the following scale:

- [1] strongly agree
- [2] moderately agree
- [3] neutral/uncertain
- [4] moderately disagree
- [5] strongly disagree
- [6] not applicable

- 1 1. The goals of this course were clearly presented. **VERY WELL**
- 1 2. The lectures were well organized and instructive. **" "**
- 1 3. The readings complemented and enhanced the course. **[TOO MANY FOR TIME FRAME OF CLASS MTGS; HOWEVER, THEY WILL ENHANCE OVERALL EXPERIENCE AND PROVIDE A VALUABLE RESOURCE]**
- 1 4. The written assignments and examinations were fair.
- 1 5. I would recommend this course to other students. **DEFINITELY**
- 1 6. The grading was fair. **?**
- 1 7. The instructor was accessible and helpful. **VERY**
- 1 8. The instructor was enthusiastic and knowledgeable about the subject. **YES**
- 1 9. The instructor encouraged questions and was open to suggestions. **YES**
- 1 10. I would recommend this instructor to other students. **DEFINITELY**

any questions - call me Ed Vata

## DEPARTMENT OF HISTORY COURSE EVALUATION

Course Number HP20Z - Building Trades

Instructor Tom Visser, Judy Hayward

Fall/Spring/Summer 19 96

Please take a few minutes to give us your assessment of this course. The Department of History uses course evaluations in its annual review of each faculty member. In addition, the instructor will use the results as an aid to the improvement of instruction.

I prefer not to answer the following questions \_\_\_\_\_

Questions 1 - 10 should be answered using the following scale:

- [1] strongly agree
- [2] moderately agree
- [3] neutral/uncertain
- [4] moderately disagree
- [5] strongly disagree
- [6] not applicable

- 1 1. The goals of this course were clearly presented.
- 1 2. The lectures were well organized and instructive.
- 1 3. The readings complemented and enhanced the course.
- 2 4. The written assignments and examinations were fair.
- 1 5. I would recommend this course to other students.
- 1 6. The grading was fair.
- 1 7. The instructor was accessible and helpful.
- 1 8. The instructor was enthusiastic and knowledgeable about the subject.
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# DEPARTMENT OF HISTORY COURSE EVALUATION

Course Number HP 202 - BUILDING TRADES

code: 60167

Instructor VISSER / HAYWARD.

Fall/Spring/Summer '9 96

Please take a few minutes to give us your assessment of this course. The Department of History uses course evaluations in its annual review of each faculty member. In addition, the instructor will use the results as an aid to the improvement of instruction.

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Fall/Spring/Summer 19 96

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## DEPARTMENT OF HISTORY COURSE EVALUATION

Course Number HP202 BUILDING TRADES CODE 60167

Instructor T. VISSEK / J. HAYWARD

Fall/Spring/Summer 1996

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## DEPARTMENT OF HISTORY COURSE EVALUATION

Course Number HP 202 Building Trades Code 60167

Instructor T. Kissel / J. Hayward

Fall/Spring/Summer 19 \_\_\_\_\_

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