-19/13-5-92A 19401 Germantown Road ---Pumphrey/Mateney House



Historic Preservation Commission

51 Monroe Street, Suite 1001, Rockville, Maryland 20850 217-3625

APPLICATION FOR HISTORIC AREA WORK PERMIT

TAX ACCOUNT #	,
NAME OF PROPERTY OWNER ROBERTY	TELEPHONE NO. (201) GUT US 3
ADDRESS 16710 IZIVIEW ICD 12001 EC	THE MAN SON
CONTRACTOR SHIME.	TELEPHONE NO.
CONTRACTOR REGISTRATIO	IN NUMBER
CONTRACTOR REGISTRATIO	TELEPHONE ND.
	(Include Area Code)
REGISTRATION NUMBER _	
LOCATION OF BUILDING/PREMISE	
House Number 19401 Street Company	pull Ro (ict HE)
Town/City (-E12111+MTCWM Elec	•
Nearest Cross Street	
Lot Block Subdivision	
Liber 1353 Folio 1973 Parcel (6)	
1A. TYPE OF PERMIT ACTION: (circle one) Construct Extend/Add Alter/Renovate Repair Wreck/Raze Move Install Revocable Revision	Fence/Wall (complete Section 4) Other
TO COMPT DUCTION COSTS SCTIMATES	+ BUILD 27' WHERE
1B. CONSTRUCTION COSTS ESTIMATE \$ 1C. IF THIS IS A REVISION OF A PREVIOUSLY APPROVED ACTIVE F	PERMIT SEE PERMIT #
1D. INDICATE NAME OF ELECTRIC UTILITY COMPANY	* max - m
1E. IS THIS PROPERTY A HISTORICAL SITE?	
	·
PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDIT	FIONS
2A. TYPE OF SEWAGE DISPOSAL	2B. TYPE OF WATER SUPPLY
O1 () WSSC O2 () Septic	01 () WSSC 02 () Well
03 () Other	03 () Other
PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL	
4A. HEIGHTfeetinches	
4B. Indicate whether the fence or retaining wall is to be constructed on one	of the following locations:
1. On party line/Property line	
2. Entirely on land of owner	
3. On public right of way/easement	_ (Hevocable Letter Required).
I hereby certify that I have the authority to make the foregoing application plans approved by all agencies listed and I hereby acknowledge and accept this t	
Signature of ownersor authorized agent (agent must have signature notarized of	
APPROVED ————————————————————————————————————	
DISAPPROVED Signature DEF	Pand M Date 4.30.92
APPLICATION/PERMIT NO: 2000 2000 2000 2000 2000 2000 2000 20	Can traily sole
DATE FILED:	FILING FEE:\$
DATE ISSUED:	PERMIT FEE: \$BALANCE\$
OWNERSHIP CODE:	RECEIPT NO. FEE WAIVED

HISTORIC PRESERVATION COMMISSION STAFF REPORT

ADDRESS: 19401 Germantown Road MEETING DATE: 4/8/92

RESOURCE: Pumphrey/Mateney House REVIEW: HAWP/Alteration

CASE NUMBER: 19/13-5-92A TAX CREDIT ELIGIBLE: No

PUBLIC NOTICE: 3/25/92 STAFF: Nancy Witherell

APPLICANT: Robert Albiol REPORT DATE: 4/1/92

The Pumphrey/Mateney House, a prominent Master Plan resource near the Germantown Historic District, is a two-story, frame Gothic Revival-style house with two-over-two wood sash windows. The house has been rehabilitated for commercial use.

The applicant proposes the installation of thirty-five custom-measured, white-finish, aluminum triple-track storm windows. The meeting rails of each window pair would be aligned. This proposal was denied by the HPC at its August 15, 1990, meeting.

In ideal circumstances, storm windows would not be applied to historic structures for the sake of authentic appearance. However, the National Park Service recommends the installation of correctly measured and installed tripletrack storm windows for increased energy efficiency and for protection of the original sash. The use of storm windows in the rehabilitation of a historic frame building for office use is consistent with the <u>Secretary of the Interior's Standards for Rehabilitation</u>, and is discussed in Preservation Brief #3, "Conserving Energy in Historic Windows" (see page 5 of Brief #3, attached by the applicant to the HAWP proposal), as well as in Preservation Brief #9, "The Repair of Historic Wooden Windows". Because of the dangers of condensation, the National Park Service prefers the installation of exterior to interior storm windows.

A second part of the applicant's proposal (not previously seen by the HPC) is the construction of a brick-paved ramp from the gravel parking lot adjacent to the house up to the sidewalk. The ramp would allow the parking lot to be accessible to people using wheelchairs. Three feet in width and 24 feet in length, the ramp would rise approximately two vertical feet. Red brick was selected as the paving material because brick sidewalks were once used in front of the Pumphrey-Mateney House. The staff finds the use of red brick acceptable but suggests that the use of concrete or concrete pavers would provide a more uniform appearance between the concrete sidewalk and the gravel parking lot.

STAFF RECOMMENDATION

The staff finds the proposed alterations consistent with the purposes of Chapter 24A, particularly 24A-(b)2:

The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site, or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter.

The proposal is also found to be consistent with the Secretary of the Interior's Standards #1, #2, #9, and #10:

A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the buildings and its site and environment.

The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

New additions . . . shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.



Historic Preservation Commission

51 Monroe Street, Suite 1001, Rockville, Maryland 20850 217-3625

APPLICATION FOR HISTORIC AREA WORK PERMIT

TAX ACCOUNT # 2883645
NAME OF PROPERTY OWNER _ ROBERT ALBIOL TELEPHONE NO. (301) 9454273
(Contract/Purchaser) (Include Area Code) ADDRESS (COLOR RIVER RD . POOLEVILLE , MID 20835)
CITY STATE ZIP
CONTRACTOR — TELEPHONE NO. — SELVE CONTRACTOR REGISTRATION NUMBER — TELEPHONE NO.
PLANS PREPARED BY POWERT AUSICE TELEPHONE NO. Same
(Include Area Code)
REGISTRATION NUMBER
LOCATION OF BUILDING/PREMISE
House Number 19401 Street GERMANTOWN RD (R+ 118)
The state of the s
Town/City Cremmantown Election District Dist 9 Sub 1
Nearest Cross Street Wisteria
Lot Block Subdivision Subdivision
Liber 9353 Folio 293 Parcel 062
TYPE OF PERMIT ACTION: (circle one) Construct Extend/Add Alter/Renovate Repair Porch Oeck Fireplace Shed Solar Woodburning Stown Wreck/Raze Move Install Revocable Revision Fence/Wall (complete Section 4) Other Stock William Construction Costs Estimates
PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS 2A. TYPE OF SEWAGE DISPOSAL 01 () WSSC 02 () Septic 03 () Other 03 () Other
PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL
4A. HEIGHTfeetinches
4B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
On party line/Property line Entirely on land of owner
On public right of way/easement (Revocable Letter Required).

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

SUPPLEMENTAL APPLICATION FOR HISTORIC AREA WORK PERMIT REQUIRED ATTACHMENTS

1. WRITTEN DESCRIPTION OF PROJECT

a. Description of existing structure(s) and environmental setting, including their historical features and significance:

The Pumphney-Materian House was constructed in 1883. It is an American Honoestead that was the area's first store. When I took it over 2 years ago I was in ruins. Today it has been restored to what it was circa 1910. Unfortunately, it is surrounded by the MARC parking lot.

b. General description of project and its impact on the historic resource(s), the environmental setting, and, where applicable, the historic district:

Please see enclosed letter and copy of the windows desa. All the original windows have been resolved. The starm windows will be needed to protect the original windows and to reduce the energy last of the heating / Ac systems.

2. Statement of Project Intent:

Short, written statement that describes:

a. the proposed design of the new work, in terms of scale, massing, materials, details, and landscaping:

b.	the relationship of this design to the existing res	ourc	e(s):	
				,
<u> </u>				
с.	the way in which the proposed work conforms requirements of the Ordinance (Chapter 24A):	to	the	specific

3. <u>Project Plan</u>:

Site and environmental setting, drawn to scale (staff will advise on area required). Plan to include:

- a. the scale, north arrow, and date;
- b. dimensions and heights of all existing and proposed structures;
- brief description and age of all structures (e.g., 2 story, frame house c.1900);
- d. grading at no less than 5' contours (contour maps can be obtained from the Maryland-National Capital Park and Planning Commission, 8787 Georgia Avenue, Silver Spring; telephone 495-4610); and
- e. site features such as walks, drives, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.
- 4. <u>Tree Survey</u>: If applicable, tree survey indicating location, caliper and species of all trees within project area which are 6" in caliper or larger (including those to be removed).

- 5. <u>Design Features</u>: Schematic construction plans drawn to scale at 1/8" = 1'-0", or 1/4" = 1'-0", indicating location, size and general type of walls, window and door openings, roof profiles, and other fixed features of both the existing resource(s) and the proposed work.
- 6. <u>Facades</u>: Elevation drawings, drawn to scale at 1/8" = 1'0", or 1/4" = 1'0", clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for exterior must be noted on the elevations drawings. <u>An existing and a proposed elevation drawing of each facade affected by the proposed work is required</u>.
- 7. <u>Materials Specifications</u>: General description of materials and manufactured items proposed for incorporation in the work of the project.
- 8. <u>Photos of Resources</u>: Clearly labeled color photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
- 9. <u>Photos of Context</u>: Clearly labeled color photographic prints of the resource as viewed from the public right-of-way and from adjoining properties, and of the adjoining and facing properties.

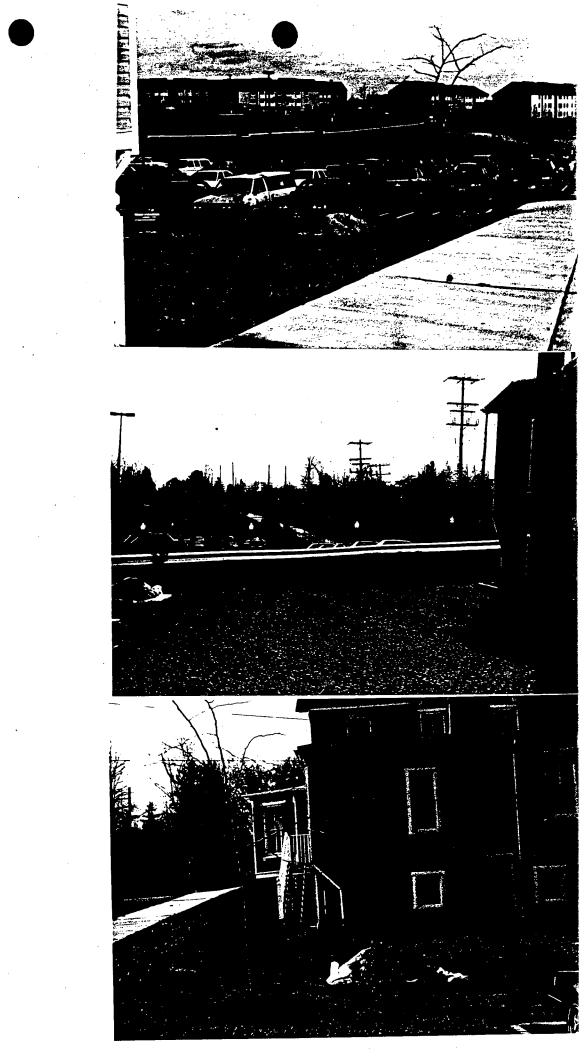
Color renderings and models are encouraged, but not generally required.

Applicant shall submit 2 copies of all materials in a format no larger than 8 1/2" x 14"; black and white photocopies of color photos are acceptable with the submission of one original photo.

10. Addresses of Adjacent Property Owners. For all projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question. If you need assistance obtaining this information, call the Department of Assessments and Taxation, at 279-1355.

1.	Name _	Mc Co. W. C.T.
	Address	EU 41 , Parcol 101 + 118
	City/Zip _	Radille mo
2.	Name _	BEN LEWIS (EU41P65)
	Address _	Ben Lewis Runbing
	City/Zip _	Coermen Seven. WD

3.	Name	Maurice Ftaquet	(EU.41,650
	Address	Are Harrion 60B	•
	City/Zip	Burselly Bogner	~
4.	Name Address		(EU41, PT)
•	City/Zip	RackLotte, uns 2083	50
5.	Name Address		
6.	,		
0.	Address		
7.	Name		
	Address City/Zip		
8.	Name		. · · · · · · · · · · · · · · · · · · ·
,	Address City/Zip		
17 5 7E			









ROBERT M. ALBIDI 16710 RIVER RORD POOLESUILLE, MD 20837 (301) 948-4273



RESTORATION OF HISTORIC HOMES

March 15, 1992

Mo. Co. Historic Preservation Commission 8787 Georgia Ave Silver Spring, MD 20910

As you know over the last two years I have been restoring the Pumphrey-Mateney House in Germantown. I hope to complete this labor of love by June. As you can imagine, the restoration of the 39 window was time consuming and costly. I wish to preserve these windows as well as reduce the energy consumption of this building. Therefore, I request that you grant me permission to install triple track storm windows.

I, as do other preservationists, object to the aesthetic nature of triple track storm windows; however, I strongly believe that the they will contribute significantly to the preservation of this building and that they are environmentally sound. And in contrast to interior storms, they will allow the occupants of the building to open a window when they wish.

These arguments are presented much more eloquently in the enclosed letter from Michael Day of Maryland s Historical Trust and the Preservation Brief from the Department of Interior.

Every effort will be made to make the storm windows as inconspicuous as possible. They will be custom made, painted white (as are the house s windows) and the cross stiffing bar will fall across the top of the bottom sash and the bottom of the top sash as to reduce its visibility.

Please be so kind as to approve this reasonable request.

Sincerely,

4203180061

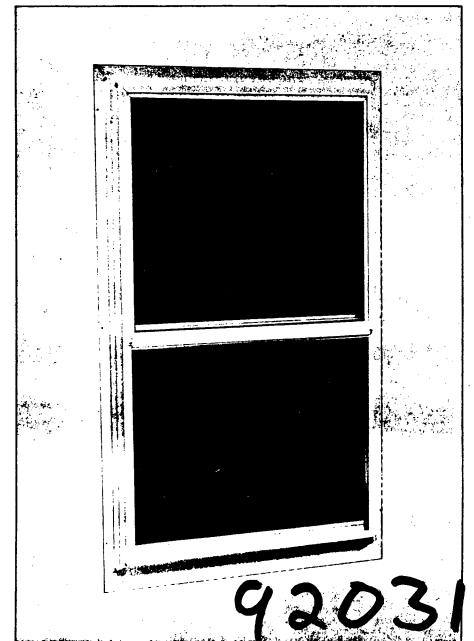


Starlite Aluminum Storm Window

SERIES 110

he Series 110 Starlite Storm Window is a triple-track, precision engineered storm window. The triple-track allows easy changes from storm sashes to screen. A fixed center mull keeps the side channels true and plumb and the interlocking sashes

seal out the weather. To simplify cleaning, the Series 110 inserts are removable to the interior. This window has been tested for structural performance according to ANSI/AAMA 1002.9-1977 and is available in mill, white, bronze, or beige finish.



STOCK SIZE CHART

FOR WOOD WINDOW SIZE	ORDER STORM WINDOW SIZE	STORM WINDOWS WILL BE MADE THIS SIZE WIDTH HEIGHT
- 1-8 x 3-2	20 x 39	19-7/8 x 38-3/4
2-0 x 3-2	24 x 39	23-7/8 x 38-3/4
2-4 x 3-2	28-₩39	27-7/8 x 38-3/4
2-8 x 3-2	32 x 39	31-7/8 x 38-3/4
3-0 x 3-2	36 x 39	35-7/8 x 38-3/4
3-4 x 3-2	40 x 39	39-7/8 x 38-3/4
1-8 x 3-10	20 x 47	19-7/8 x 46-3/4
2-0 x 3-10	24 x 47	23-7/8 x 46-3/4
2-4 x 3-10	28 x 47	27-7/8 x 46-3/4
2-8 x 3-10	32 x 47	31-7/8 x 46-3/4
3-0 x 3-10	36 x 47	35-7/8 x 46-3/4
3-4 x 3-10	40 x 47	39-7/8 x 46-3/4
. 1-8 x 4-2	20 x 51	19-7/8 x 50-3/4
2-0 x 4-2	24 x 51	23-7/8 x 50-3/4
2-4 x 4-2	28 x 51	27-7/8 x 50-3/4
2-8 x 4-2	32 x 51	31-7/8 x 50-3/4
3-0 x 4-2	36 x 51	35-7/8 x 50-3/4
3-4 x 4-2	40 x 51	39-7/8 x 50-3/4
1-8 x 4-6	20 x 55	19-7/8 x 54-3/4
2-0 x 4-6	24 x 55	23-7/8 x 54-3/4
2-4 x 4-6	28 x 55	27-7/8 x 54-3/4
2-8 x 4-6	32 x 55	31-7/8 x 54-3/4
3-0 x 4-6	36 x 55	35-7/8 x 54-3/4
3-4 x 4-6	40 × 55	39-7/8 x 54-3/4
1-8 x 5-2	20 x 63	19-7/8 x 62-3/4
2-0 x 5-2	24 x 63	23-7/8 x 62-3/4
2-4 x 5-2	28 x 63	27-7/8 x 62-3/4
2-8 x 5-2	32 x 63	31-7/8 x 62-3/4
3-0 x 5-2	36 x 63	35-7/8 x 62-3/4
5 21		

Kinco windows are designed for blind-stop mounting. Custom window measurements should be frame-to-frame on width and frameto-sill on height. This is the opening measurement.

Oriel or cottage windows (unequal sash) need CMR measurement denoted on order.

Storm panels and screens will be made to exact dimensions ordered.

TITLE

Starlite Aluminum Storm Window

MODEL

110 Series

PRODUCTS

150 Westside Drive • P.O. Box 6279 Asheville, NC 28816 • 704-254-2353 NC WATS 1-800-627-1074 Outside NC, call 800-438-5811 Fax 704-254-2354

8006



STRUCTURAL PERFORMANCE TEST RESULTS

TEST PROCEDURE: The test specimen was evaluated in accordance with ANSI/AAMA 1002.9 - 1977, "Voluntary Specifications for Aluminum Combination Storm Windows for External Application." The results were tabulated as follows:

TITLE OF TEST	MEASURED	ALLOWED
Air Infilitration		
@ 0.56 psf (15 mph)	0.56 CFM/FT	
@ 1.56 psf (25 mph)	1.30 CFM/FT	4.0-1.0 CFM/FT
Water Drainage	No water over	No water over
	buck sill.	buck sili.
Uniform Load		
@ 10 psf (63 mph) (exterior)	No Damage	No Damage
@ 5 psf (44 mph) (interior)	No Damage	No Damage
Concentrated Load and Glass Adherence	3/22"	1/8"
Safety Drop	MEETS AS STATED	
Glass and Screen Insert Squareness	3/16"	5/16"
Attachment of Insect Screening to Frame	50" #	40" #
Percet #NCTI .110.0292.2		

SPECIFICATIONS

General: All windows shall be triple track, self storing, inside removable, adaptable to either overlap or blindstop application and shall be the "Starlite" aluminum doublehung combination window as manufactured by Kinco Products, Asheville, N.C.

Materials:

- a) All aluminum members shall be extruded of 6063-T5 aluminum alloy and shall have a minimum wall thickness of .045 inches within commercial tolerances.
- b) Corner reinforcements and pivot pins for inserts shall be piated steel, latch bolts shall be die cast Zamak #3.
- c) Weatherstripping shall be woven pile polypropylene.
- d) Slide bolt springs and all assembly screws shall be plated steel.
- e) Glass shall be single strength "B" quality (SSB) up to eleven (11) square feet in size. Over eleven square feet of glass shall be double strength "B" quality (DSB).
- f) Giazing spline shall be vinyl especially

designed for wrap-around (Marine) giazing.

- g) Screen cloth shall be 18 x 16 fiberglass mesh.
- h) Screen spline shall be vinyl .140 O.D.

Construction:

- 1. Double Hung Windows
 - a) The master frame shall have mittered corners accurately machined to produce hair-line joints and shall be securely fastened with two screws at each corner. The master frame shall have a fixed center bar riveted to the outside face at the meeting rail. Weep holes shall be provided in the sill section of the frame.
 - b) Glass and screen insert frames shall have mitered corners with hair-line joints and shall be securely fastened together.

The glass insert frames shall be weatherstripped with woven pile polypropylene.

The top and bottom sash shall interlock at center meeting rail. Glazing shall be held in place with reusable vinyl glazing spline.

- c) The screen insert frame shall have mitered corners with halr-line joints and shall be securely fastened together. The top member shall be weatherstripped to provide insect controi at the meeting rail. The screen cloth shall be securely held in place with vinyl spline rolled into a receiver groove.
- 2. Fixed Combination Windows
 The fixed combination windows shall be
 fabricated of the same aluminum shapes
 and materials specified above. The glass
 insert shall be removable and shall be
 securely held in place with screw fastened
 locks that pivot into prepared slots in the
 master frame.

Finishes: All windows shall have a mill finish or painted with a white, bronze or beige acrylic enamel electrostatically applied and baked.

William Donald Schaefer Governor

> Jacqueline H. Rogers Secretary, DHCD



Division of Historical and Cultural Programs Office of Cultural and Educational Services August 12, 1991

Mr. Robert M. Albiol 16710 River Road Poolesville, Maryland 20837

Re: Pumphrey - Mateney House

Germantown, Maryland

Dear Mr. Albiol:

Thank you for your letter of June 20, 1991 concerning the installation of exterior storm windows on the above-referenced property. It is my understanding that the Montgomery County HPC placed a condition on the historic area work permit that prohibits you from installing exterior, triple-track storm windows on this property. I must say that I agree with your description of the condition as "perplexing."

You are indeed correct in your understanding that the use of triple-track storm windows on historic buildings is not only an acceptable preservation practice but, in fact, recommended by this office as well as the National Park Service. Therefore, I am a little surprised by the HPC's decision.

The obvious reason triple-track storm windows are recommended is to increase energy efficiency while protecting the historic window from the detrimental effects of the environment. Although the use of interior storm windows may produce a more preferred aesthetic solution to the energy efficiency problem, they significantly increase the potential for damage to the historic window and sill from condensation.

My suggestion to you is that you return to the HPC and, once again, ask for approval of the installation of the exterior storm windows. If you haven't already, you may want to include with your request, a copy of "Preservation Brief #3" which, as you have indicated, states the National Park Service's stance on this topic. Although the HPC will receive a copy of this letter, you may also want to include a copy with your request.

Department of Housing and Community Development
45 Calvert Street, Room 423, Annapolis, Maryland 21401 (301) 974-5585

Mr. Robert M. Albiol August 12, 1991 Page 2

Should you have any questions concerning my comments, please feel free to call me at (310) 514-7617.

Sincerely,

Michael K. Day

Chief,

Planning and Educational Outreach

MKD/jja

cc: Ms. Gwen Marcus

Maryland-National Capital Park and Planning Commission

Mr. Leonard Taylor, Jr.

Chairman, Montgomery County Historic

Preservation Commission

3 PRESERVATION BRIEFS

Conserving Energy in Historic Buildings

Baird M. Smith, AlA



Technical Preservation Services Division

Office of Archeology and Historic Preservation/Heritage Conservation and Recreation Service

With the dwindling supply of energy resources and new efficiency demands placed on the existing building stock, many owners of historic buildings and their architects are assessing the ability of these buildings to conserve energy with an eye to improving thermal performance. This brief has been developed to assist those persons attempting energy conservation measures and weatherization improvements such as adding insulation and storm windows or caulking of exterior building joints. In historic buildings, many measures can result in the inappropriate alteration of important architectural features, or, perhaps even worse, cause serious damage to the historic building materials through unwanted chemical reactions or moisture-caused deterioration. This brief recommends measures that will achieve the greatest energy savings with the least alteration to the historic buildings, while using materials that do not cause damage and that represent sound economic investments.

Inherent Energy Saving Characteristics of Historic Buildings

Many historic buildings have energy-saving physical features and devices that contribute to good thermal performance. Studies by the Energy Research and Development Adminis-

Figure 1. This 1891 Courthouse and Post Office in Rochester, New York, has built-in energy conserving features such as, heavy masonry walls, operable windows, an interior skylighted atrium which provides light and ventilation, and roof-top ventilators which keep the building cooler in the summer. Also note the presence of awnings in this old photograph.

tration (see bibliography) show that the buildings with the poorest energy efficiency are actually those built between 1940

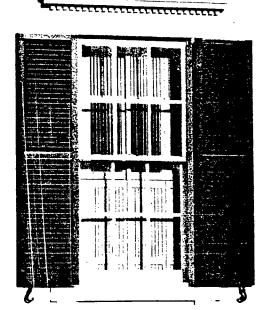


Figure 2. Shutters can be used to minimize the problem of summer heat gain by shading the windows. If operable shutters are in place, their use will help reduce the summer cooling load. (Photo: Baird Smith)

and 1975. Older buildings were found to use less energy for heating and cooling and hence probably require fewer weatherization improvements. They use less energy because they were built with a well-developed sense of physical comfort and because they maximized the natural sources of heating, lighting and ventilation. The historic building owner should understand these inherent energy-saving qualities.

The most obvious (and almost universal) inherent energy saving characteristic was the use of *operable windows* to provide natural ventilation and light. In addition, historic commercial and public buildings often include interior light ventilation courts, roof-top ventilators, clerestories or skylights (see figure 1). These features provide energy efficient fresh air and light, assuring that energy consuming mechanical devices may be needed only to supplement the natural energy sources. Any time the mechanical heating and air conditioning equipment can be turned off and the windows opened, energy will be saved.

Storm Windows: Windows are a hary source of heat loss because they are both a poor thermal barrier (R factor of only 0.89) and often a source of air infiltration. Adding storm windows greatly improves these poor characteristics. If a building has existing storm windows (either wood or metal framed), they should be retained. Assure they are tight fitting and in good working condition. If they are not in place, it is a recommended measure of a preservation retrofitting plan to add new metal framed windows on the exterior. This will result in a window assembly (historic window plus storm window) with an R factor of 1.79 which outperforms a double paned window assembly (with an air space up to 1211) that only has an R factor of 1.72. When installing the storm windows. be careful not to damage the historic window frame. If the metal frames visually impair the appearance of the building, it may be necessary to paint them to match the color of the historic frame (see figure 6).

Triple-track metal storm windows are recommended because they are readily available, in numerous sizes, and at a reasonable cost. If a pre-assembled storm window is not available for a particular window size, and a custom-made storm window is required, the cost can be very high. In this case, compare the cost of manufacture and installation with the expected cost savings resulting from the increased thermal efficiency. Generally, custom-made storm windows, of either wood or metal frames, are not cost effective, and would not be recommended in a preservation retrofitting plan.

Interior storm window installations can be as thermally effective as exterior storm windows; however, there is high potential for damage to the historic window and sill from condensation. With storm windows on the interior, the outer sash (in this case the historic sash) will be cold in the winter, and hence moisture may condense there. This condensation often collects on the flat surface of the sash or window sill causing paint to blister and the wood to begin to deteriorate. Rigid plastic sheets are used as interior storm windows by attaching them directly to the historic sash. They are not quire as effective as the storm windows described previously because of the possibility of air infiltration around the historic sash. If the rigid plastic sheets are used, assure that they are installed with minimum damage to the historic sash, removed periodically to allow the historic sash to dry, and that the historic frame and sash are completely caulked and weatherstripped.

In most cases, interior storm windows of either metal frames or of plastic sheets are not recommended for preservation retrofitting because of the potential for damage to the historic window. If interior storm windows are in place, the potential for moisture deterioration can be lessened by opening (or removing, depending on the type) the storm windows during the mild months allowing the historic window to dry thoroughly.

Basement and Crawl Space Insulation: Substantial heat is lost through cold basements and crawl spaces. Adding insulation in these locations is an effective preservation retrofitting measure and should be a high priority action. It is complicated, however, because of the excessive moisture that is often present. One must be aware of this and assure that insulation is properly installed for the specific location. For instance, in crawl spaces and certain unheated basements, the insulation is generally placed between the first floor joists (the ceiling of the basement) with the vapor barrier facing up. Do not staple the insulation in place, because the staples often rust away. Use special auchors developed for insulation in moist areas such as these.

In heated basements, or where the basement contains the heating plant (furnace), or where there are exposed water and sewer pipes, insulation should be installed against foundation walls. Begin the insulation within the first floor joists, and proceed down the wall to a point at least 3 feet below the



Figure 6. The addition of triple track storm windows, as shown here, greatly improves the thermal performance of existing window assemblies, with a minimal impact on the appearance of the building. (Photo: Baird Smith)

exterior ground level if possible, with the vapor barrier facing in. Use either batt or rigid insulation.

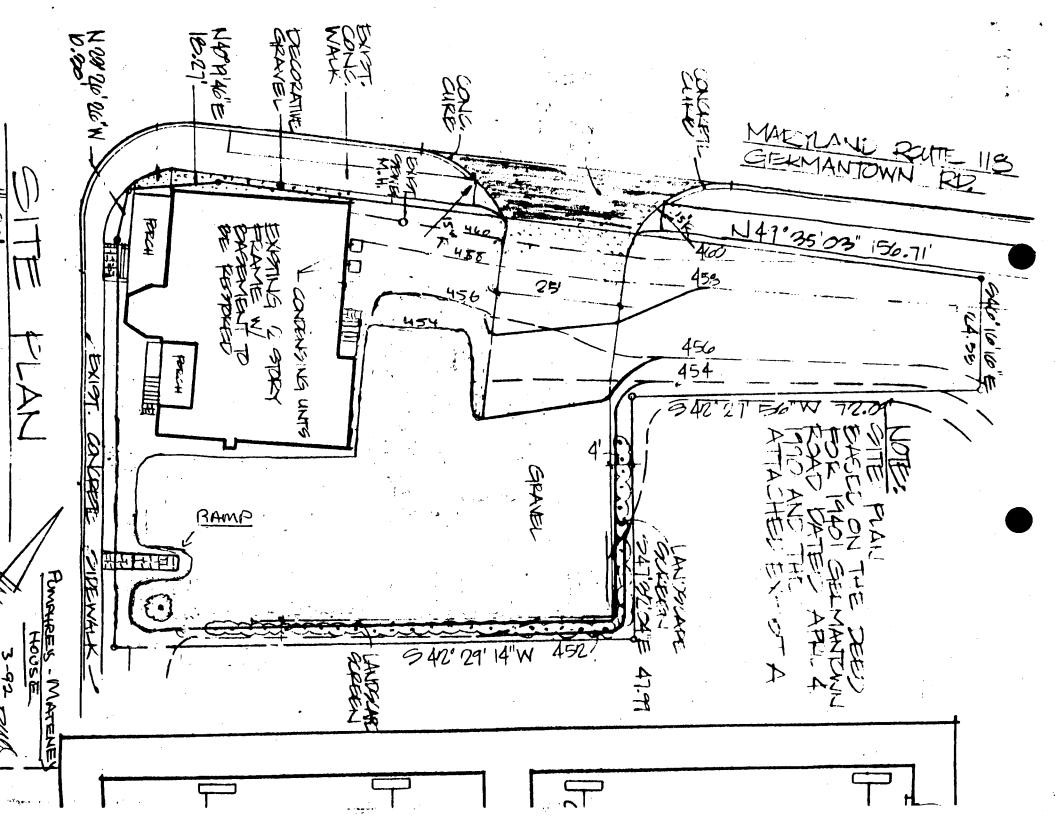
Installing insulation in the basement or crawl space should be a high priority of a preservation retrofitting plan, as long as adequate provision is made to ventilate the unheated space, perhaps even by installing an exhaust fan.

Duct and Pipe Insulation: Wrapping insulation around heating and cooling ducts and hot water pipes, is a recommended preservation retrofitting measure. Use insulation which is intended for this use and install it according to manufacturer's recommendations. Note that air conditioning ducts will be cold in the summer, and hence moisture will condense there. Use insulation with the vapor barrier facing out, away from the duct. These measures are inexpensive and have little potential for damage to the historic building.

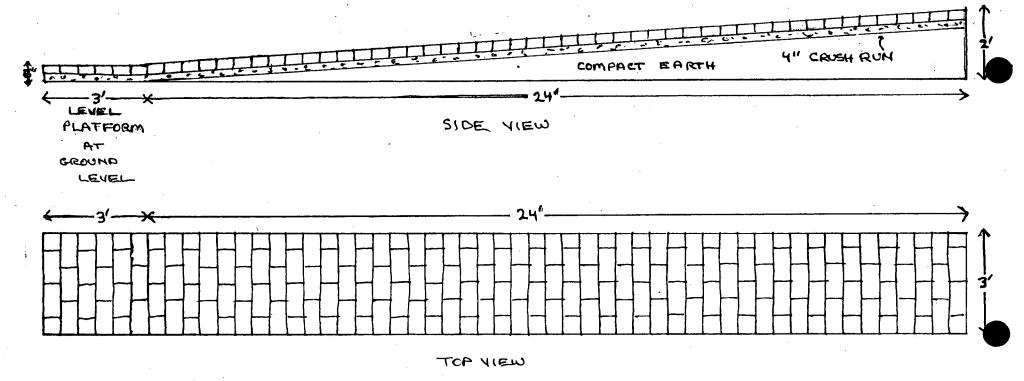
Awnings and Shading Devices: In the past, awnings and trees were used extensively to provide shade to keep buildings cooler in the summer. If awnings or trees are in place, keep them in good condition, and take advantage of their energysaving contribution. Building owners may consider adding awnings or trees if the summer cooling load is substantial. If awnings are added, assure that they are installed without damaging the building or visually impairing its architectural character (see figure 7). If trees are added, select deciduous trees that provide shade in the summer but, after dropping their leaves, would allow the sun to warm the building in the winter. When planting trees, assure that they are no closer than 10 feet to the building to avoid damage to the foundations. Adding either awnings or shade trees may be expensive, but in hot climates, the benefits can justify the costs.

Doors and Storm Doors: Most historic wooden doors, if they are solid wood or paneled, have fairly good thermal properties and should not be replaced, especially if they are important architectural features. Assure that the frames and doors have proper maintenance, regular painting, and that caulking and weatherstripping is applied as necessary.

A storm door would improve the thermal performance of the historic door; however, recent studies indicate that installing a storm door is not normally cost effective in residential settings. The costs are high compared to the anticipated savings. Therefore, storm doors should only be added to

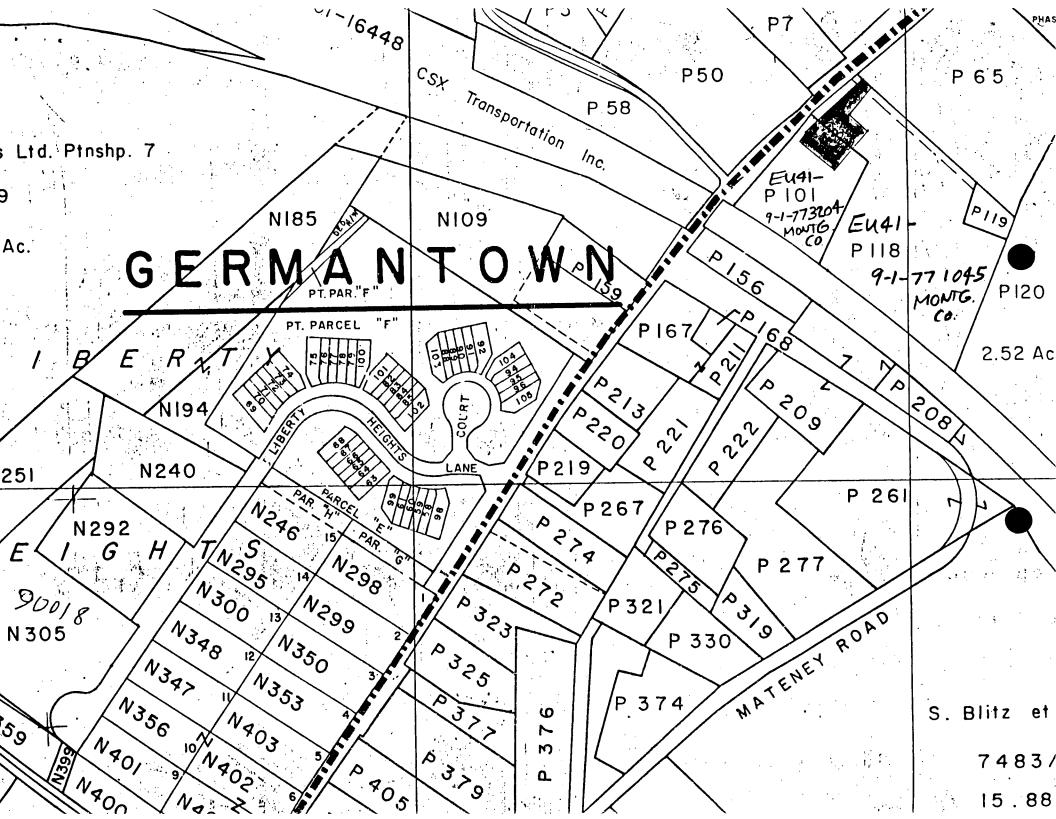


BRICK RAMP PUMPHREY-MATENEY HOUSE



SLOPE 9"RISE TO 12' RUN

3/92 TRULA

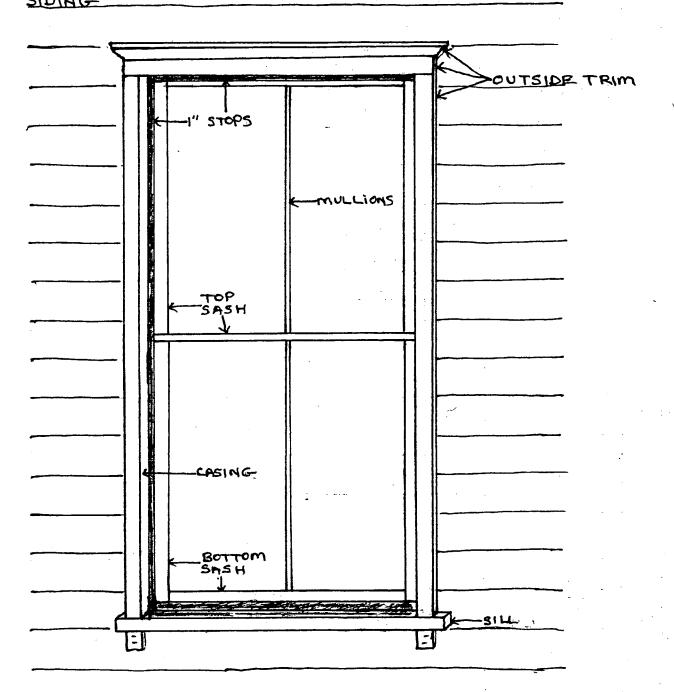


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Pumphrey's House

FRONT VIEW

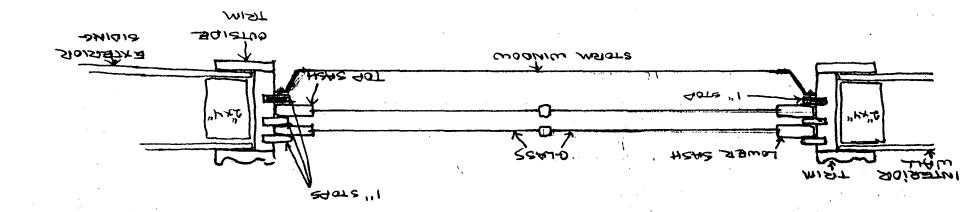
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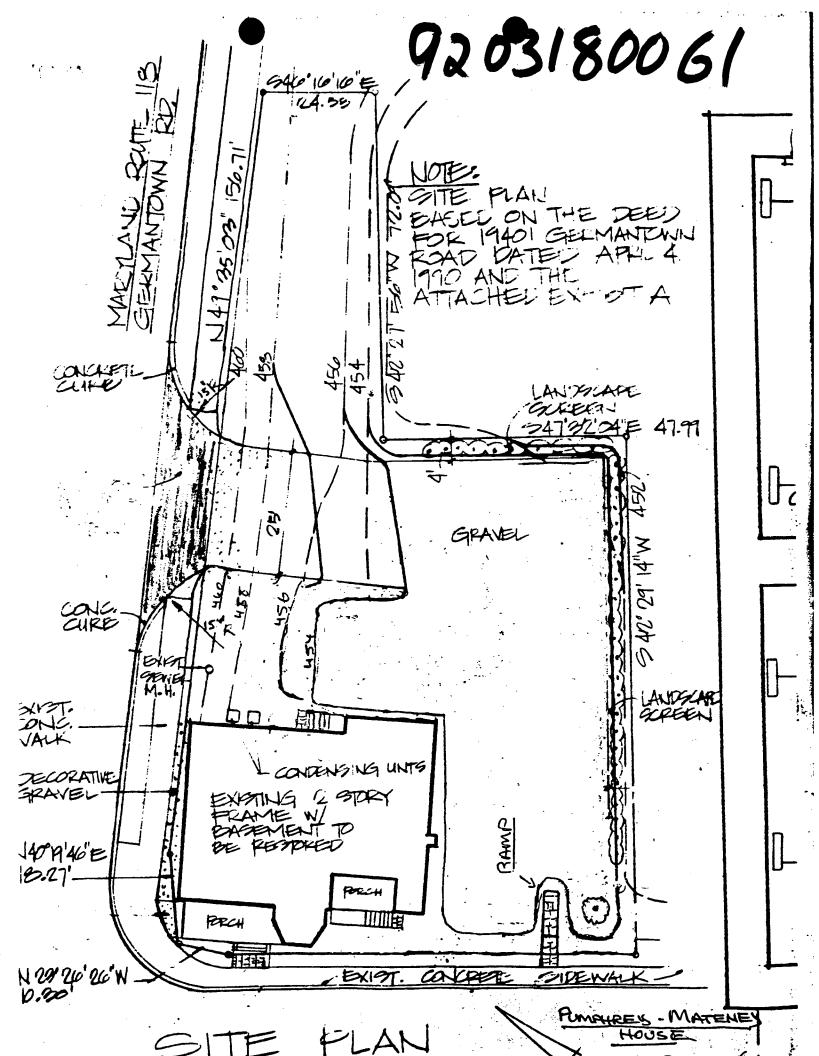
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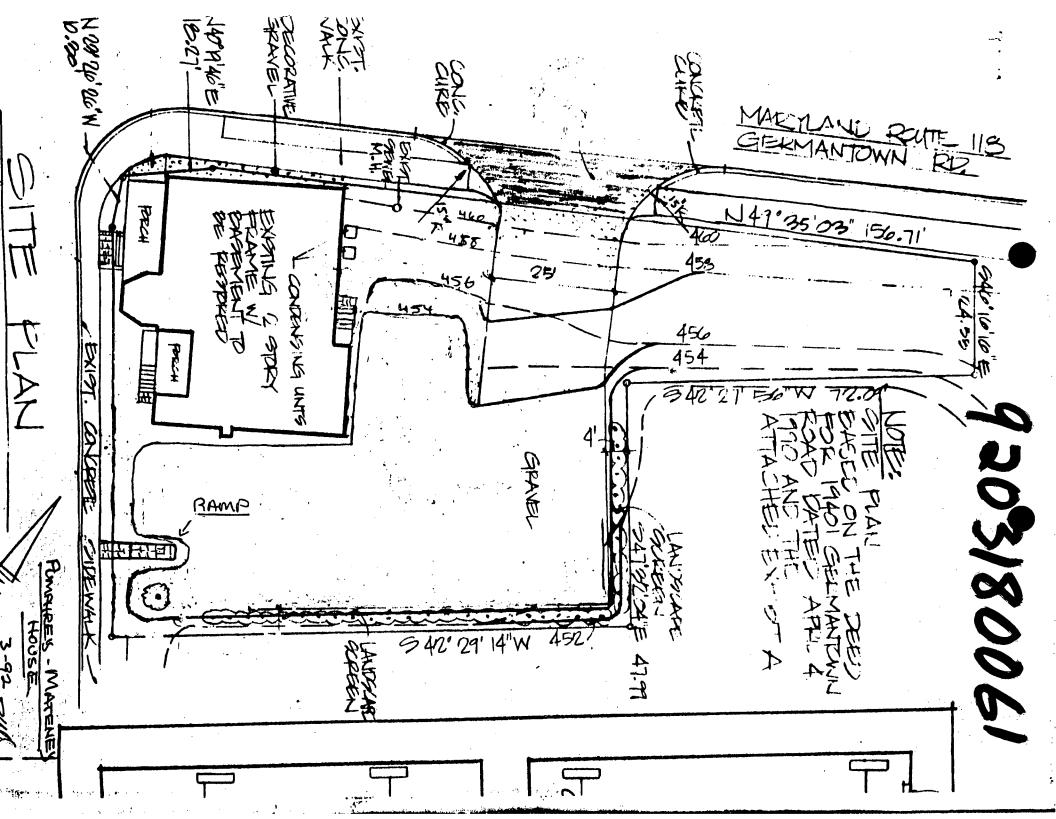
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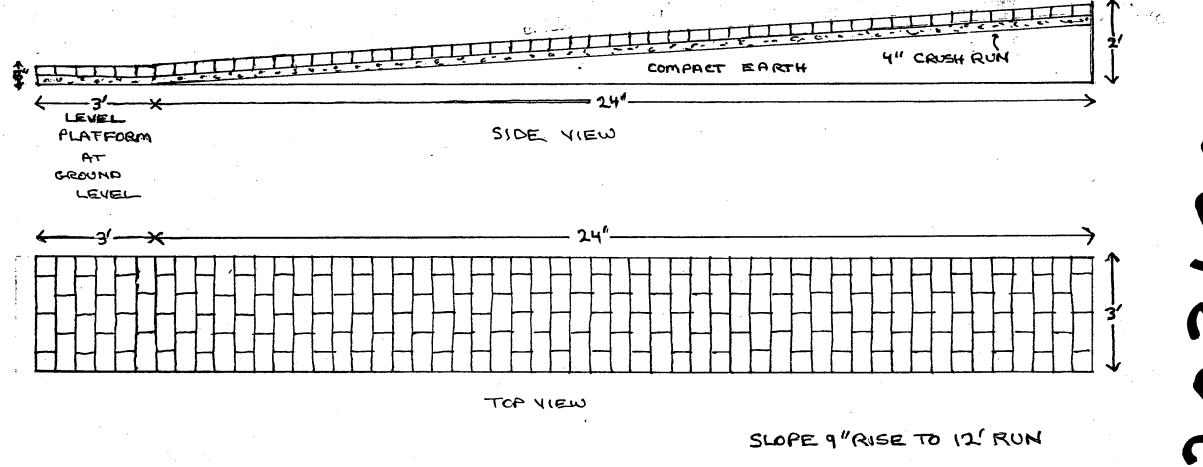
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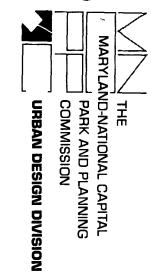




BRICK RAMP PUMPHREY-MATEREY HOUSE



3/92 BULL



19401 Germantour Road 19/13-5-92A Punghan Matany House HANR: A/O/92



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