

Smith-Curtiss House Complex
Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report
Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Conditions Assessment **for the** **Smith-Curtiss House and Property**

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418



September 2010

Prepared by:
Faesy-Smith Architects PC
523 Danbury Road
Wilton, CT 06897

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

TABLE OF CONTENTS

- **List of figures and photos** _____ **3**
- **Glossary of terms** _____ **6**
- **Administrative data** _____ **8**
- **Bibliography** _____ **9**
- **Introduction** _____ **10**
- **Historical Background** _____ **12**
- **Condition Assessment and Recommendations** _____ **13**
 - **Site** _____ **13**
 - **House** _____ **17**
 - Foundation
 - Chimneys
 - Framing
 - Roofing and Drainage
 - Insulation
 - Siding and Wood Trim
 - Doors and Windows
 - Interior Fixtures and Furnishings
 - Interior Finishes
 - Plumbing System
 - Mechanical System
 - Electrical System
 - **Garage** _____ **50**
 - Foundation
 - Framing
 - Roofing and Drainage
 - Siding and Wood Trim
 - Doors and Windows
 - Interior Fixtures and Finishes
 - Interior Finishes
 - Electrical System
- **Alternate Use Feasibility** _____ **54**
- **Opinion of Probable Cost** _____ **55**

ATTACHMENTS

- A. Location of property on FW Beers Atlas of Derby, Ct. Dated: 1868
- B. Site Plan of property Date: Sept. 25, 1951
- C. Drawings of Existing Floor Plans and Elevations
- D. Drawing SK-1 Smith-Curtiss House – Probable Sequence of Expansion
- E. Sketch of typical “rain screen” application
- F. Sketch of example of a historically appropriate storm panel
- G. Sketch of typical interior window trim

(Existing plans and elevations of the Smith-Curtiss House are courtesy of Gilley Design Associates, Architects, LLC. Gilley Design Associates, Architects, LLC is released from all liability regarding the plans and elevations.)

LIST OF FIGURES AND PHOTOS

Fig.1: View of house from street _____	14
Fig.2: Deteriorated siding of north side of house _____	14
Fig.3: Collapsing retaining wall _____	15
Fig.4: View of outhouse and garage _____	15
Fig.5: Patio on east side of house _____	16
Fig.6: Granite veneer over foundation wall on west side _____	18
Fig.7: Portico landing and steps _____	18
Fig.8: Collapsing cellar stair _____	19
Fig.9: Photo of crawl space taken from access way _____	19
Fig.10: Large fieldstone chimney _____	21
Fig.11: Small brick chimney _____	22
Fig.12: 2x6 rafters sistered on to 5x5 common rafters _____	23
Fig.13: Rafters of second ‘lean-to’ addition _____	24
Fig.14: North side of house covered with ‘tyvek’ _____	25
Fig.15: Rotting sill on north side of house _____	26
Fig.16: Shoring on the south side of cellar _____	27
Fig.17: First floor framing with mold and powder post beetle damage _____	27

Fig.18: East side of house _____	28
Fig.19: Deteriorating fiberglass insulation in the crawl space _____	29
Fig.20: Loose fill insulation in attic of original portion of the house _____	29
Fig.21: Original corn cob insulation _____	30
Fig.22: Portico _____	31
Fig.23: Hole in siding on south side of house _____	31
Fig.24: Clapboard siding on the west side of house _____	31
Fig.25: Entrance door and sidelights _____	33
Fig.26: Detail of handle on batten door _____	33
Fig.27: Detail of (spring activated) latch side of door _____	33
Fig.28: Panel door in north parlor _____	34
Fig.29: Batten door in bedroom #1 _____	34
Fig.30: Double hung window in south parlor _____	35
Fig.31: Double hung window _____	35
Fig.32: ‘Bilco’ hatch on south side of house _____	36
Fig.33: Kitchen _____	38
Fig.34: Bathroom sink _____	38
Fig.35: Bathroom tub _____	39
Fig.36: Cupboard _____	40
Fig.37: Mantel in bedroom #1 _____	40
Fig.38: Fireplace in keeping room _____	41
Fig.39: Raised paneling in the front hall _____	41
Fig.40: Rear stair railings _____	41
Fig.41: Double hung window in bedroom #3 _____	42

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Fig.42: North wall of bedroom #1 _____	43
Fig.43: North wall of north parlor _____	43
Fig.44: Deteriorating floor in kitchen _____	44
Fig.45: Oak strip floor in south parlor _____	45
Fig.46: Water line entering crawl space on north side of house _____	46
Fig.47: Mechanical system in cellar _____	47
Fig.48: Electrical panel _____	48
Fig.49: Fuse box _____	48
Fig.50: Electrical conduit running down corner board _____	49
Fig.51: Garage _____	50
Fig.52: Interior of garage (southeast corner) _____	51
Fig.53: North side of garage _____	51
Fig.54: Detail of garage trim and novelty siding _____	52

GLOSSARY OF TERMS

A.D.A. – Americans with Disabilities Act (ADA) is a law that was enacted by the U.S. Congress in 1990. It is "An Act to establish a clear and comprehensive prohibition of discrimination on the basis of disability."

Back Band – Wood trim applied to the outer perimeter of a window or door casing.

Batten Door – An early door design, consisting of vertical planks fastened together with horizontal battens. This type of door is frequently found in 17th and 18th century buildings of New England.

Bent – In timber frame construction, a bent is a framework composed of several structural members that defines the cross-section of a building or supports a trestle. The term *bent* is probably an archaic past tense of the verb *to bind*, referring to the way the timbers of a bent are joined together.

‘Bilco’ Hatch – Is a trade name for a hatch door that typically is used to cover access to a Cellar.

Bolection Molding – A Bolection is a molding which projects beyond the face of a panel or frame, usually found in paneling, doors and fireplaces, especially when the meeting surfaces are at different levels.

Building Paper – Is felt impregnated with asphalt and used to cover the sub sheathing of an exterior wood frame wall or roof. It acts to deflect the infiltration of moisture into a building, while at the same time permits the transmission of moisture vapor from the interior of the building to the exterior.

BX Cable – Is a generic trademark term for type AC armored electrical cable.

Chair Rail – Is a type of molding fixed horizontally to the wall around the perimeter of a room.

Common Rafter – A Common rafter, in timber frame construction is one of a series of sloped structural members that extend from the ridge to the purlin or plate below.

Double Hung – Is made of one or more movable panels or "sashes" that form a frame to hold panes of glass which are often separated from other panes (or "lights") by narrow muntins.

Frass – Is bore dust left by wood-boring insects such as Powder Post Beetles.

H.V.A.C – Is an acronym for ‘heating, ventilation and air condition’.

Leader – Is the vertical pipe that connects to a gutter and directs rain water to the ground.

M.E.P. – Is an acronym for ‘mechanical, electrical and plumbing’.

Muntin – Is a strip of wood or metal separating and holding panes of glass in a window

Novelty Siding – A style of clapboard siding, popular in the 1930’s – 50’s in which the profile of the claps were ‘scooped’ out to create a more pronounced shadow line.

Panel Door – Panel doors, also called stile and rail doors, are built with frame and panel construction.

Parge Coat – A thin coat of a cementitious or polymeric mortar applied to concrete for refinement of the surface.

Pilaster – Is slightly-projecting column built into or applied to the face of a wall. Most commonly flattened or rectangular in form, pilasters can also take a half-round form or the shape of any type of column.

Pit Saw – Is a long two handled saw used in a saw pit over which lumber is positioned to be sawed by two men, one standing above the timber and the other below. It was used for producing sawn planks from tree trunks, which could then be cut down into boards, pales, posts, etc.

Plate – In timber frame construction, is a horizontal wood member (typically 7”x7” square) upon which rafters or joists will bear.

Portico – A portico (from Italian) is a porch leading to the entrance of a building, or extended as a colonnade, with a roof structure over a walkway, supported by columns or enclosed by walls. This idea first appeared in Ancient Greece and has influenced many cultures, including most Western cultures.

Powder Post Beetle – Are a group of wood boring beetles in the insect subfamily Lyctidae. Powder post beetles lay their eggs in wood and the larvae can continue to live in and consume the wood for months or even years. They leave the wood upon reaching adulthood. They bore tunnels through the wood and as a result leave behind distinctive piles of dusty frass.

Rain Screen – Is a construction system in which furring strips are applied vertically to the sub sheathing of an exterior wall and then the exterior cladding (i.e. clapboard) is attached to the furring strips. This provides an air space behind the exterior cladding which allows any moisture that gets through the siding to run down and out the wall without penetrating the actual wall of the building. See Attachment E.

Sistering – In wood construction, is when an additional joist or stud is attached to the side of an existing member in order to stiffen or strengthen it.

Spalling – Is the process of surface failure in which ‘spall’ (or flakes of material) are shed. In brickwork, the freeze/thaw cycle of moisture which has penetrated the brick is the common cause, although spalling in brick can also occur as a result of salt within the brick which begins to crystallize and expand at the surface of the brick causing enough pressure to spall off the face of the brick.

Stool & Apron – Are the trim work found around the base of a window. The stool is the sill of the window, and the apron is a band of trim directly below the sill.

Strong Back – Is a type of beam which is installed above the members it is to support. The ‘strong back’ is strapped to the members to be supported. It is typically introduced retroactively as a supplement to a pre existing framing system in order to help resist deflection.

Tyvek – Is a brand of flash spun high-density polyethylene fibers, a synthetic material; the name is a registered trademark of DuPont. The material is very strong; it is difficult to tear but can easily be cut with scissors or any other sharp object. Water vapor can pass through Tyvek (highly breathable), but not

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

liquid water, so the material lends itself to a variety of applications including for covering exterior wall sub sheathing.

Vapor Barrier – Is often used to refer to any material, typically a plastic or foil sheet that resists diffusion of moisture through wall, ceiling and floor assemblies of buildings.

Veneer – In Masonry construction, is a layer of veneer masonry such as bricks or stone used as building cladding and not imparting any structural strength to the wall

Wainscot – Is a wall covering constructed from rigid or semi-rigid components. These are traditionally interlocking wood, but could be plastic or other materials.

ADMINISTRATIVE DATA

Faesly-Smith Architects PC were retained in May 2010 by State of Connecticut Department of Environmental Protection (DEP) to prepare a Conditions Assessment of the Smith–Curtiss House, Garage and Grounds located at 411 Hawthorne Avenue, Derby CT 06418 and part of the Osbornedale State Park.

The Smith-Curtiss House will serve as one of the first preservation projects in Connecticut’s new “Resident Curator Program” which is a public-private partnership between the state and an individual or individuals who will agree to rehabilitate, preserve and maintain the House, Garage and property in lieu of rent.

This report has been prepared to serve as a guide to aid the DEP and future ‘Resident Curator’ as they endeavor to rehabilitate the buildings and property of 411 Hawthorne Avenue, Derby, CT 06418. It is for the exclusive use of the CT DEP and is not to be used by any other party, and if it is, Faesy-Smith Architects cannot be held accountable for any information contained within the report.

This report has been edited for content and grammar by the CT DEP.

Smith-Curtiss House Complex
Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report
Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

BIBLIOGRAPHY

Katz, Gary and Bill Robinson. Detailing Rain-Screen Siding. *Journal of Light Construction*. March, 2006.
pp. 1-6.

Kelly, Frederick J. *Early Domestic Architecture of Connecticut*. New York, NY: Dover, 1963.

Swanke, Hayden, Connell Architects. *Historic Preservation Project Planning and Estimating*. Kingston, MA: RSMMeans, 2000.

RS Means Engineering. *Building Construction Cost Data 2008 Book*. Kingston, MA: RSMMeans, 2008.

In addition to the above reference material, Faesy-Smith Architects consulted a variety of sources that were made available by the Connecticut Department of Environmental Conservation, the National Park Service, the Environmental Protection Agency and that were available online.

INTRODUCTION

The purpose of this report is to provide a general survey of the existing conditions of the House, Garage and grounds and to identify areas that are found to have deficiencies.

The inspection of the House, Garage and site was conducted by Faesy-Smith Architects on May 28, 2010.

With the exception of readings taken from a moisture meter, the inspection was strictly visual.

Extensive notes and photographs were taken of the existing conditions. From information gathered, this assessment report was produced.

The report reviews the overall condition of each building and highlights the specific areas in which deficiencies were found.

Along with the noting and categorization of the various deficiencies found, we have recommended some potential solutions for remediation and have organized them by order of priority:

- **Priority #1** tasks are items that are primarily related to stabilization in order to protect and prevent the buildings from further deterioration. Priority #1 tasks should be completed within the next one to two years.
- **Priority #2** tasks are items that include work that will allow the house to be habitable and to satisfy current building and life safety codes. Priority #2 tasks should be completed within the next 3 to 5 years.
- **Priority #3** tasks are mainly cosmetic in nature. They are low priority task items and could be completed in 5 to 7 years.

This report also contains a peripheral Historical Background of the property and an Opinion of Probable Cost for the remedial work identified.

We recommend that all work performed on the buildings and grounds should be undertaken by persons with experience working on comparable projects that are similar in scale, complexity and historic nature.

All work performed shall follow the **Secretary of Interior's Standards for the Treatment of Historic Properties**. The general preservation standards are as follows:

1. A property will be used as it was historically, or be given a new use that maximizes the retention of distinctive materials, features, spaces, and spatial relationships. Where a treatment and use have not been identified, a property will be protected and, if necessary, stabilized until additional work may be undertaken.
2. The historic character of a property will be retained and preserved. The replacement of intact or repairable historic materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Work needed to stabilize, consolidate, and conserve existing historic materials and features will be physically and visually compatible, identifiable upon close inspection, and properly documented for future research.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. The existing condition of historic features will be evaluated to determine the appropriate level of intervention needed. Where the severity of deterioration requires repair or limited replacement of a distinctive feature, the new material will match the old in composition, design, color, and texture.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

For additional information on the Secretary of the Interior's Standards visit:

www.nps.gov/hps/tps/standguide/

www.nps.gov/history/local-law/arch_stnds_0.htm

HISTORICAL BACKGROUND

Property:

The buildings and grounds of the Smith-Curtiss property are part of 411 acres, known as Osbornedale Farm, accumulated by Frances E. Osborne Kellogg, granddaughter of John W. Osborne, one of Naugatuck Valley's early industrial entrepreneurs. The Osbornedale Farm was well known for its prized dairy cattle bloodlines. The Farm was deeded by Mrs. Osborne Kellogg to the State of Connecticut in 1956, with the exception of seven parcels (including the Smith-Curtiss House) where the residents were given lifetime tenancy.

In 1979, the DEP submitted a park plan for the remaining seven parcels. Part of the proposal was for the Smith-Curtiss House to function as a residence for the Park Manager.

In 1981, the Trustees approved and transferred the properties stating they would be in "perpetual trust for park purposes" by the State of Connecticut.

The House has been vacant since 2001.

House:

The Smith-Curtiss House, according to records in the Derby Tax Assessor's Office dates back to circa 1713.

Several historians specializing in 18th century buildings have speculated that the additions to the House likely date to circa 1740-1780.

The House, with its timber frame, central chimney mass, and simple 'saltbox' massing is a classic example of the early colonial architecture found in Connecticut. There is evidence that the Smith-Curtiss House evolved from a single bay post and beam frame with a gable roof on the north side of the chimney, followed by the addition of a second bay on the south side of the chimney. Two more 'lean-to' additions were subsequently added to the east. The most recent of which probably dates back to the late 19th or early 20th century.

CONDITIONS ASSESSMENT AND RECOMMENDATIONS

Preliminary Analysis:

While not required for the Resident Curator Program, it is an option to document the structure according to the H.A.B.S. (Historic American Buildings Survey) and H.A.E.R. (Historic American Engineering Record) standards.

For additional information regarding the federal H.A.B.S./H.A.E.R. program, visit:

www.nps.gov/history/hdp/standards/standards.htm

www.nps.gov/history/local-law/arch_stnds_6.htm

Any mechanical upgrades or structural remediation that may be needed will require detailed drawings and specifications produced by a licensed Architect or Engineer.

SITE

Assessment:

The property, though unoccupied for several years, appears to have been maintained. The lawn immediately surrounding the House and Garage had been recently mowed. General debris has been removed. The remainder of the property has been left unmowed and treated more as meadow than lawn.

According to a survey of the property produced for Frances E.O. Kellogg by George E. Thompson, Civil Engineer, dated September 25, 1951, a Barn stood in the northwest corner of the property that was approximately 24ft. wide x 58ft. long. There was also a cottage about midpoint along the east side of the property.

After measuring back from the Smith-Curtiss House to the approximate location of the barn, according to the 1951 survey, no trace of a foundation was located. There is an existing line of mature trees that suggests its prior location. A subsurface excavation may reveal more information.

Some portions of the foundation of the cottage are still visible.

An old hydrant was found in on the middle of the west side of the property. We were not able to verify if it was serviceable.

The Smith-Curtiss House is currently connected to the town's sewer, water and gas. There is a dug well off the northeast corner of the House which is covered by a fieldstone cap.

There does not appear to be any subterranean drainage. The leader drains from the Smith-Curtiss House direct water onto the ground around the perimeter of the House.

The large trees surrounding the buildings appear to be relatively healthy, but should be examined for dead branches and pruned regularly.



Figure 1: View of House from street.

There are shrubs, small trees and vines along the south and west sides of the House. Some of the vines have attached themselves to the wood frame portion of the House and are visibly damaging it. The shrubs and small trees are constricting the movement of air around the building, inviting moisture and possibly damaging the foundation with their root systems. The minimal plantings around the Garage (pachysandra and weeds) do not appear to be damaging the building, though the grade on the east side of the garage is close to the wood sill of the building and could potentially bring moisture into the building.



Figure 2: Deteriorated siding on south side of House.

The asphalt driveway is in useable, but poor condition. There are weeds growing through the cracks which will continue to deteriorate the pavement.

The dry stacked retaining wall that supports the terraced front yard on the west side of the House is collapsing in several areas. The low picket fence on top of the retaining wall appears to be relatively new, but is in need of some repair and paint.



Figure 3: Collapsing Retaining Wall.

There is an unused outhouse on the east side of the garage that should be removed once the House becomes occupied.



Figure 4: View of outhouse and garage.

There is a fenced garden enclosure of recent vintage, northeast of the garage, but nothing that suggests it has any historic significance.

The stone patio off the east side of the House is uneven and is set very close to the wood sill of the House. It is visibly rotting the wood frame and cladding.



Figure 5: Patio on east side of House

Recommendations:

General Comments:

Maintenance around the property should continue. The lawn area should be mowed on a regular basis and the meadow area should be field cut a few times a season.

Priority 1 Tasks:

- **Exterior Landscape:**
 - Remove or prune shrubs, remove small trees and vines from perimeter of foundation.
 - Examine and prune large trees surrounding the House and Garage.
 - Pull up patio on the east side of the House and stockpile stones, excavate down, compact the soil and re-install patio stones over 4" layer of compacted crushed stone over compacted stone dust so that the top of the patio is minimum 6" below the bottom of the wood sill of the House.
 - Lower grade on east side of garage to allow minimum 6" below bottom of wood sill.

Priority 2 Tasks:

- **Driveway:**
 - **Option A:** Repair and patch any cracks or potholes in the driveway, and apply a sealer coating.
 - **Option B:** Rough up and resurface the existing driveway with 2" thick layer of new asphalt surface and seal.
 - **Option C:** Remove the existing asphalt pavement prep for and install new stone driveway.
- **Drainage:**
 - **Option A:** Remove the flexible drain extensions. Replace with aluminum drain extensions that match leader drains and install fieldstone splash blocks beneath them.
 - **Option B:** Connect the existing leader drains to new underground drainage system that will pull the roof rainwater away from perimeter of House and drain out either to daylight on the west side of the property or into an underground storm water chamber.

- **Option C:** On some or all of the leader drain locations, install rain water collection barrels. The collected rain water could be used for irrigation of surrounding plantings.
- **Retaining wall:**
 - Repair or reconstruct the collapsed portions of the retaining wall. Reuse existing stone or install new stone to match existing.
- **Low picket fence:**
 - Any damaged or rotted portions of the low picket fence mounted to the retaining wall should be repaired as required and the entire fence should be repainted.

Priority 3 Tasks:

- **Vegetable garden:**
 - The now defunct vegetable garden should either be revitalized or removed.
- **Landscaping:**
 - Develop a master landscaping and planting plan that reintroduces native plants in a historically sensitive design.

HOUSE

Preliminary Analysis:

Prior to commencement of any work on or around the House, paint samples should be taken from several locations around both the interior and exterior surfaces of the House. The samples should be tested for the presence of lead by an EPA (Environmental Protection Agency) certified testing laboratory. As of April 22, 2010, contractors performing renovation, repair and painting of projects that disturb lead based paint in homes built prior to 1978 must be certified to remove lead paint by the EPA and must follow specific work practices to prevent lead contamination

For more information contact the NLIC (National Lead Information Center) or visit <http://www.epa.gov/lead>.

For guidelines on the removal of paint from historic surfaces, please consult the National Park Service's *Preservation Brief 10 – Exterior Paint Problems on Historic Woodwork*.
<http://www.nps.gov/history/hps/TPS/briefs/brief10.htm>

The House should be inspected by a professional asbestos inspector. If asbestos is detected, the asbestos in the House should be removed by an EPA certified asbestos abatement contractor. For more information visit <http://www.epa.gov/asbestos/index.html>

Foundation:

Assessment:

The foundation of the Smith-Curtiss House consists primarily of grouted fieldstone walls of varying widths (ranging from 8” to 24” in width) and appears to be in relatively good condition.

The front, west facing, facade of the House's foundation has an approximately 5" thick granite slab veneer. Some of the veneer has come free of the fieldstone foundation wall. This is likely due to moisture getting behind it and breaking the grout bond through the freeze-thaw cycle.



Figure 6: Granite veneer over foundation on west side.

The landing and steps that are part of the front, west facing, portico have settled considerably and have been vandalized with spray paint.



Figure 7: Portico landing and steps.

There is a full height cellar on the south side of the House that is accessed by an exterior stair covered by a hatchway and an interior stair from the kitchen. The interior cellar access stair is in very poor condition.

The cellar has a concrete slab floor that is largely intact.

The fieldstone foundation walls that make up the exterior perimeter of the cellar appear to be in relatively good condition.

The interior wall of the cellar on the north side which separates the cellar from the crawl space consists only of deteriorated horizontal wooden planks. The planks have given way to the soil behind and are as a result, causing the deterioration and collapse of the wooden stair from kitchen to the cellar.

The north half of the House has crawl spaces beneath it. The crawl spaces have dirt floors and their heights from the bottom of the first floor framing vary from approximately 0" to +/-24". The only access to the crawl spaces is through a hatch covered exterior stair on the north side of the House. The access way is limited as it has filled in with dirt and debris. There are indications that the crawl spaces are inhabited by animals.



Figure 8: Collapsing interior cellar stair.



Figure 9: Photo of crawl space taken from access way.

There are interior piers inside the crawl spaces consisting of dry stacked stones which support portions of the timber frame. Some of the piers have settled and do not appear stable.

Priority 1 Tasks:

• **Front Portico:**

- Take detailed photographs and careful measurements of existing granite landing and steps.
- Provide temporary shoring for the portico roof and columns. Remove the granite slabs that make up the landing and steps and store for reinstallation.
- Install proper footing and foundation (with footings a minimum of 42" below grade).
- Clean graffiti from the granite slabs and reinstall landing and steps.

- **Granite veneer:**
 - Carefully inspect the granite veneer along the west side of the foundation wall.
 - Document placement and remove any loose granite veneer, catalog and store for reuse.
 - Prepare fieldstone foundation wall and re-grout the granite veneer pieces back into their original locations.

- **Interior Foundation Wall:**
 - On north side of cellar, shore up framing above as required to allow for the removal of the failing wood plank wall retaining the earth in the north crawl space.
 - Replace collapsed wooden stair.
 - Excavate as required to install new 8” concrete block foundation wall over poured concrete footing. Consult architect or engineer for details and specifications on the wall.

- **Crawl Spaces:**
 - Excavate existing crawl spaces down to maintain a minimum 36” clear space from the underside of lowest beam.
 - Temporarily shore framing supported by stone piers. Remove stone piers and replace with concrete block or mortared fieldstone masonry piers over adequately sized concrete footings that extend below the proposed excavated depth. Consult architect or engineer for details on pier locations sizes, and specifications.
 - Install 2” thick concrete rat slab over 6 mil. polyethylene vapor barrier over 2” thick rigid polyisocyanurate foam insulation over 4” thick layer of crushed stone over well compacted soil.

Priority 2 Tasks:

- **Ventilation & Humidity Control:**
 - **Air circulation and ventilation:** The crawl spaces and cellar are currently unventilated.
Option A: Cut openings into the foundation wall (minimum 1 per wall) and install small screened vents.
One of the existing sash windows in the cellar should be replaced with a temperature sensitive screened vent or fan connected to a vent that will close when temps get below the freezing mark.
Option B: Introduce a mechanical ventilation system by way of a fan connected to a vent to the exterior.
 - **Dehumidification:** A dehumidifier should be installed in the cellar. It should be set up so that collected moisture is drained into the House’s drainage system.

Chimneys:

Assessment:

There are two chimneys in the House, a large central fieldstone chimney and a small brick chimney on the eastern exterior wall.

Large Fieldstone Chimney: The fieldstone chimney is centrally located and serves five fireplaces in the House and the furnace in the cellar. It is constructed of fieldstone and has a substantial base measuring approximately 10' x 10' in plan. The chimney appears to be in very good condition. It is clear that it has been restored fairly recently, most likely during the latter half of the 20th century. The fireplaces all have metal dampers and there is an ash dump in the cellar. These features would not have been present when the chimney was first constructed and so indicate a later renovation. The smaller fireplaces are lined with yellow refractory brick which is a more recent material not available at the time the House was built.

At the time of this investigation we did not determine whether the flues were in working condition or whether each fireplace has its own flue as is required to meet current code. The portion of the chimney that protrudes from the roof looks to have been recently restored and is in very good condition. The flashing between the chimney and roof also looks new. It appears to be made of a rubber-like membrane rather than the more traditional copper or lead coated copper. The chimney cap is made of galvanized steel and is pyramidal in shape. It also looks relatively new and is effectively serving its purpose of keeping rain and snow from entering the chimney flue, but is not historically correct; over time the galvanized cap will begin to rust.



Figure 10: Large fieldstone chimney

Small Brick Chimney: The smaller chimney is located on the eastern exterior wall of the House and like that side of the House, is a more recent addition, probably dating to the late 19th or early 20th century. It is not currently functional, but probably once served as a flue for a cast iron stove. The top of the chimney has deteriorated. Some of the bricks are cracked and spalling due to moisture infiltration. The brick chimney has no functional purpose at the present time. While it is not original to the House, it is still part of the history of the House and should be preserved.



Figure 11: Small brick chimney

Recommendations:

Priority 2 Tasks:

- **Fieldstone Chimney:**
 - Have the chimneys cleaned and inspected for code compliance.
 - If the individual fireplaces do not have their own flues as is required by code, consult an architect or engineer to assess whether or not it is feasible to bring the existing chimney up to code with five working fireplaces plus furnace flue.
 - If it is not feasible by code to have all fireplaces operable, then a decision needs to be made to cap off access to certain fireplaces in the House and to line the flues as required to meet code.

- **Brick Chimney:**
 - The deteriorated brickwork at the top of the chimney should be repaired by replacing the broken bricks with bricks of like color and vintage.
 - The chimney should be capped off at the top with masonry to prevent any moisture from entering the flue.

Framing:

Overview:

The House consists of timber frame construction of various widths. From our examination of the frame it is clear that the House evolved from a series of additions from the original portion on the north west side of House, expansion to the south, followed by two 'lean-to' additions that extended the house to the east. (See Attachment D)

Roof Framing:

Assessment:

The roof framing of the original portion of the House consists of 5"x5" (actual dimension) oak common rafters with spacing ranging from 4'10" to 5'5" on center. A few nails found in the rafters in the original

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

portion of the House appear to be hand forged iron which is further evidence that the original portion of the House likely dates back to the middle of the 18th century, if not earlier.

Further and more in-depth investigation is required, but it is possible that the bay on the south side of the fieldstone chimney was an addition that occurred not long after the original portion of the House was constructed on the north side of the chimney. This was a common evolution of 18th century vernacular homes in Connecticut. We noted that the foundation on the south side of the House is full cellar height, as opposed to the crawl space on the north side. Also, the character of the cellar foundation is different than the crawl space suggesting that it was constructed at a different date.

Subsequent to the original gabled portions of the House, a lean-to addition was constructed (extending to the east) the House. The 'lean-to' addition was constructed from 2"x6" rafters at approximately 24" on center. Single 2"x6" rafters were sistered on to the original 5"x5" rafters which extended the ridge upward and to the east.



Figure 12: 2"x6" rafters sistered on to 5"x5" common rafters

The 2"x6" rafters that were sistered onto the original 5"x5" rafters have visibly deflected over time.

The majority of the rafters of the first 'lean-to' addition have vertical cuts which indicate that they were 'pit sawn' which could date them back to the first half of the 19th century.

The second 'lean-to' addition extends further to the east and is also framed with 2"x6" rafters spaced approximately 18" on center. This addition likely was built in the late 19th century or very early 20th as the cut marks are vertical but are closer together and more regular which indicates that they were cut in a water mill, or by steam power rather than sawn by hand. The observed nails also appear to be late 19th or early 20th century style.

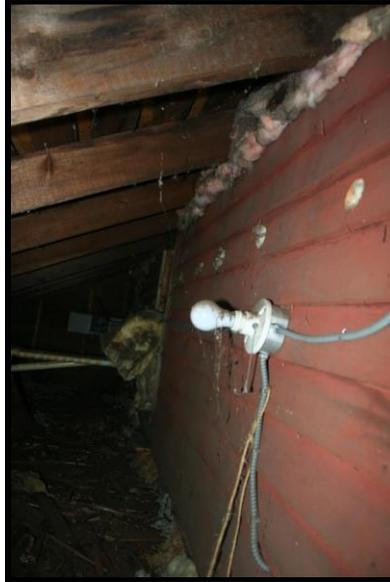


Figure 13: Rafters of second 'lean-to' addition

Recommendations:

The overall roof framing, while undersized by today's standards appears to be in generally good condition, no signs of moisture or rot were noted during our inspection.

The 2"x6" rafters sistered onto the 5"x5" rafters on the west side of the House, while visibly deflecting, appear stable. Nonetheless, the addition of some additional structural support is advised.

The plywood sheathing that was added when the new roof was installed in 2008 creates a diaphragm that is helping to laterally stabilize the roof framing.

The roof framing is structurally adequate for continued use as a residence.

If an alternate reuse of the building is chosen, then further analysis will be required to determine whether the roof as it exists will comply with current wind and seismic load requirements.

House Frame:

Assessment:

Our inspection was limited to strictly to what could be observed of the portions of the frame that were exposed to view. A substantial portion of the House is currently clad with plaster. The House frame from what could be seen, consists of an oak post and beam timber frame of varying widths, with softwood clapboard siding applied directly to the studs without any sub-sheathing.

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

The frame of the original portion of the House, when viewed from the exterior, leans to the south. We visually estimate that from base to ridge, the north facing exterior wall is at least 12” out of plumb.

We noted that the windows on the northwest side of the House and the casing and trim have been made to fit the skewed walls. The first and second floors of the original House as well as of the first ‘lean-to’ addition have undulated due to differential settling. Some of the more notable settling can be found on the east side of original and 1st ‘lean-to’ portions of the House.

Based on what is exposed to view at the moment, we believe that the shift of the House frame occurred around the time of, and probably as a result of, the first ‘lean-to’ addition. It is possible that during the excavation for the ‘lean-to’ addition, the existing foundation was undermined and as a result, the sill and cellar girt sank thereby pulling the frame vertically out of square. As further evidence of what caused the frame to shift, there is a ‘strong back’ beam in the attic on the north side of the central chimney mass equipped with threaded iron rods that look to have been installed to shore up the sagging frame. The strong back beam looks to be of similar vintage as the timbers that make up the first ‘lean-to’ addition.



Figure 14: North side of House covered with 'tyvek'

The north side of the House is covered with tyvek house wrap, which was apparently an effort to temporarily control the infiltration of moisture on that side of the House. The tyvek was not removed for our inspection, but from what could be seen, it is clear that there is severe rot along the first floor sill. From the inside face of the north wall, there is rot evident at the floor perimeter of both the first and second floors. The fact that the north wall is extremely out of plumb is a large contributing factor to the deterioration found there.

Rot along the first floor sill plate can be found in several locations all around the House.



Figure 15: Rotting sill on north side of House

Holes were noted on the south wall of the House made by birds or squirrels; at the time of our investigation birds were nesting inside one of the holes. They should be further investigated to assess the extent of the damage to the frame.

Moisture meter readings were taken (using Delmhost J-Lite) from several locations throughout the House.

The attic reading ranged from 6% to 9% indicating no pervasive moisture issues on the roof. The second floor reading was 9% to 11%; the first floor reading was 11% to 13%. Moisture readings taken of the first floor framing from the cellar level however were substantially higher than normal. The readings ranged from 18% to 22% which was the highest reading on the meter. The weather at the time of our inspection was warm and humid. Given the weather, coupled with the fact that the House has been sealed up and unconditioned for several years, the moisture readings, with exception of the exterior north wall, inside the house were at a generally acceptable level.

The majority of the first floor framing was covered with mold spores and some of the beams, sills and joists have been damaged by powder post beetles. At the time of our inspection we did not see any active powder post beetle damage occurring.

The first floor framing on the south side of the House has been internally shored up with a timber beam and posts. This is most likely due to settling that occurred as a result deterioration of the existing sill.



Figure 16: Shoring on the south side of cellar



Figure 17: First floor framing with mold and powder post beetle damage

Recommendations:

Priority 1 Tasks:

- **Stabilize shifted frame:** Further investigation is needed to assess exactly what caused the frame of the House to shift and whether the measures that were previously taken to stabilize the structure are adequate. The foundation within the crawl space, particularly on the west side of the original section of the House, needs more detailed analysis. The frame should be stabilized in its current state. Attempts to square up the frame will result in more damage to the building.
- **North Wall:** The clapboard siding along the north wall should be stripped off to expose and assess the sill, girts and posts. From what can now be seen, the majority, if not all of the first

floor sill will need to be replaced. Portions of the posts and the girt supporting the second floor will also need repair. The bottoms of the studs exposed to view have all rotted.

- **South Wall:** Where there are holes in the siding, the clapboard in that area should be removed to expose the frame to assess the extent of damage and make any required repairs.
- **First Floor Sill Plates:** In addition to the north wall, there were also several areas around the south, west and east sides of the House where rot was evident. We recommend that the bottom two to three courses of siding be removed to expose the sills for inspection. Rotted sections of the sill will need to be replaced with sills of like dimensions.
- The House should be thoroughly inspected by an exterminator to determine whether or not powder post beetles or termites are active. If so, the House should be treated accordingly prior to the commencement of any rehabilitation work.
- Any animals currently inhabiting the House should be removed.

Roofing & Drainage:

Assessment:

The House was reroofed in 2008 with fiberglass 'architectural' shingles over new plywood sheathing over existing skip sheathing planks. The roof is in excellent condition.

The chimneys look to have been flashed with a rubber membrane.

The gutters are half round aluminum with white baked enamel finish the leaders are also aluminum with white baked enamel finish and appear to have been installed at the time the roof was replaced.

The leaders drain out at the grade around the House. The drains have been extended a few feet beyond the perimeter of the foundation with flexible tubing.



Figure 18: East side of House

Recommendations:

Priority 2 Task:

- **Underground Drainage:** Connect leader drains to an underground system of pipes that either drain to daylight on the west side of the property, or drain into an underground storm water drainage chamber. The local regulations concerning storm water management should be consulted and permits should be obtained from the Town of Derby before any drainage work is performed.

Priority 3 Task:

- **Optional task:** Replace existing fiberglass roof with more historically appropriate cedar shingle or shake roof.

Insulation:

Assessment:

The insulation in the House that could be seen from the attic and the cellar is mainly fiberglass batt. Corncobs, a very early form of insulation, were also found. The batt insulation was sporadic and extremely deteriorated. There was loose fill insulation in the attic that should be tested to verify that it does not contain asbestos.



Figure 19: Deteriorating fiberglass batt insulation in the crawl space



Figure 20: Loose fill insulation in attic of original portion of House



Figure 21: Original corn cob insulation

Recommendations:

Priority 1 Task:

- The entire House should be inspected and tested for asbestos.

Priority 2 Task:

- **Insulation:** All of the existing insulation should be removed and discarded. Once the structural and MEP (mechanical, electrical & plumbing) work is complete, new insulation should be installed.
Without disturbing interior finishes pump new insulation in the form of cellulose or closed cell foam insulation into the cavities of the exterior walls, ceilings and floors.

Siding & Wood Trim:

Assessment:

The existing clapboard siding is in relatively poor condition. The siding on the north side of the House needs to be replaced entirely as noted in the framing assessment. There are areas of the siding and trim that have been damaged by animal intrusion.

The paint in most areas is flaking off the siding and trim and is certain to contain lead.

The Greek Revival portico has been damaged by moisture and animal intrusion. The fluted columns sit directly on the stone landing and have been wicking moisture which has caused the individual 'flutes' to swell and the seams to open up thus inviting in even more moisture.

Portions of the fascias and soffits show signs of rot.



Figure 22: Portico



Figure 23: Hole in siding on south side of House



Figure 24: Clapboard siding on the west side of the House

Recommendations:

Priority 1 Tasks:

- In general, repair or replace rotted or damaged sections of siding and trim with new pre-primed pine trim of sizes to match existing.
- Scrape and repaint existing wood siding according to the National Park Service's recommendations for the treatment of historic wood finishes. Check the current codes to ensure that the paint is stripped according to 'lead safe practice'.
- Remove all trim and siding from the north wall of the House. Given that the north wall is slanted, making it more exposed and vulnerable to moisture damage, once all necessary repairs to the House frame have been made we recommend that new pre-primed cedar clapboard to match existing siding profile be installed over a 'rain screen system' that will allow for air to circulate behind the siding enabling the siding to dry out more quickly. See glossary and Attachment E for more detailed explanation of a 'rain screen'.
- With the exception of the second floor windows on the east and west walls, the heads of all windows and doors should receive lead coated copper drip caps as should any horizontal band where water could potentially enter.
- Strip the bottom 2 to 3 courses of clapboard from all the way around the House. Once the repairs have been made to the sill plate, reinstall new pre-primed cedar siding with profile to match existing.
- **Portico:** the Greek Revival portico is the most detailed portion of the House's exterior and should be properly preserved. Missing dentils should be replaced to match existing. Rotted or damaged areas should be repaired or replaced to match existing. The fluted columns should be removed and restored. The columns currently sit directly on the stone landing; we recommend that they be placed on a concealed stone base that would allow for the fluted wood column to not be in direct contact with the stone landing. This work should be done after stabilizing the stone landing and steps upon which the portico will rest.

Doors & Windows:

Assessment:

Doors:

The doors are all wood and vary in style and age from batten doors, to 4 and 6 panel, to half light French doors. Most of the doors are restorable. The batten doors could be original to the House. The entrance door and sidelights look to be of similar vintage to the portico, early to mid 19th century. Most of the hardware looks to be original. There are two sets of bypass doors that go to closets in the north parlor and in bedroom #2 that look to be a relatively recent addition and not worthy of preservation.

There are 'Bilco' hatch doors covering access ways to the cellar and crawl spaces. The hatches have rusted and are in need of repair or replacement.



Figure 25: Entrance door and sidelights



Figure 26: Detail of handle on batten door



Figure 27: Detail of spring activated latch side of door



Figure 28: Panel door in the north parlor



Figure 29: Batten door in bedroom #1

Windows:

The windows are all double-hung, of varying sizes. They are not original to the House, but probably date back to the mid 19th century. The window sashes are friction fit. The windows are in generally poor condition but can be, and are definitely worthy of, restoration.

Many of the windows, most notably in the north parlor, have been adjusted to accommodate the out-of-square frame of the House.

Many of the window panes, particularly windows on the west side have been broken by vandals. Most of the remaining glass looks to be original to the windows.

None of the windows had storm panels attached, and we did not see them stored anywhere.

While the House currently has no shutters, there are existing shutter pins on each side of the west facing windows.



Figure 30: Double-hung window in south parlor



Figure 31: Double-hung window



Figure 32: 'Bilco' hatch on south side of House

Recommendations:

Doors:

Priority 1 Tasks:

- **Doors:** Restore exterior doors, sidelights and hardware. As these doors are most vulnerable to deterioration, they should be repaired and repainted according to the National Park Service's recommendations for the treatment of historic wood finishes. The doors most certainly are coated with lead paint, so the removal of the paint should follow 'lead safe guidelines' for historic properties. Hinges and hardware should also be restored.
- Repair or replace the metal 'Bilco' hatch doors.

Priority 2 Tasks:

- **Interior doors and hardware:** The majority of the interior doors are in operable condition, but are in need of paint. They should be repaired and repainted according to the National Park Service's recommendations for the treatment of historic wood finishes. The doors most certainly are coated with lead paint, so the removal of the paint should follow 'lead safe guidelines' for historic properties.

Priority 3 Tasks:

- **Bi-pass doors:** These flush panel doors in the north parlor and bedroom #2 are relatively new and are not historically appropriate. We recommend that the doors and the closets be removed from both rooms and the adjoining walls, floors and ceiling be repaired to restore the rooms to their original character.

Windows:

Priority 1 Tasks:

- **Frames:**
 - Before any windows are removed they need to be carefully inventoried. All windows should receive a small metal numbered tag that will remain attached to the window throughout the restoration process. The tags should be keyed into a master plan that will ensure that the windows will be installed back into their original locations.

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

- The windows should be repaired and repainted according to the National Park Service's recommendations for the treatment of historic wood finishes. The windows most certainly are coated with lead paint, so the removal of the paint should follow 'lead safe guidelines' for historic properties. Make any required repairs, re-glaze, repaint, and reinstall windows in their appropriate openings.
- Restore all sash locks and replace missing sash locks with new locks to match existing.
- **Glass:** Where panes of glass are missing, install new panes of similar vintage to original glazing.

Priority 2 Task:

- Remove plexiglass storm panels found on a few of the windows. Construct and install new, tight fitting and historically appropriate, wooden storm panels over all windows. See Attachment F for a typical example of a storm panel that would be commonly found over 19th century windows.

Priority 3 Task:

- **Shutters:** Look for any photographic evidence of the exterior shutters that clearly once existed on at least the west facing windows. Reconstruct and install shutters.

Interior Fixtures and Furnishings:

Assessment:

Kitchen: With the exception of a clothes dryer, there are no appliances remaining in existing kitchen. There is a plumbing rough where the washing machine once was installed on the west wall. There is a double bowl stainless steel sink on the east wall. The cabinets were clearly 'site built' probably in the 1930's or 1940's and are in poor condition. The counters are Formica over plywood with aluminum edging.



Figure 33: Kitchen

Bathroom: The fixtures in the bathroom include a small sink, toilet, and bathtub with glass sliding doors. The plumbing fixtures in the existing bath appear to be serviceable, but are of low quality.



Figure 34: Bathroom sink



Figure 35: Bathroom bathtub

Recommendations:

Priority 1 Tasks:

- **Appliances:** The kitchen currently has no serviceable appliances. It will need a stove, hood and washing machine. Check existing dryer to determine if it is in working condition. Plumbing for a dishwasher would have to be added, if desired.

Priority 3 Tasks:

- Replace kitchen cabinets and counters.
- Replace existing bath fixtures.

Interior Finishes:

Assessment:

Built-Ins: In the southeast corner of the south parlor, there is a cupboard that is one of the more quintessential features found in the majority of Connecticut's original central chimney houses. It is in excellent condition and was quite possibly installed soon after this portion of the House was constructed.

There are a series of cabinets fit into the voids around the chimney mass, also a very commonly found feature in houses of this vintage.



Figure 36: Cupboard in south parlor

Mantels: The mantels that surround the fireplaces of the House, with exception of the mantel in the keeping room are rather simple pilaster and lintel configurations. They are not original to the House, as ‘bolection’ type molding surrounds were more commonly applied around fireplaces when the House was built in the 1700s. Pilaster and lintel mantels did not come into fashion until the early 19th century.

The fireplace in the keeping room has a natural finished beaded 1x wood surround with a mantel shelf above. It looks to have been recently restored.



Figure 37: Mantel in bedroom #1



Figure 38: Fireplace in keeping room

Paneling: The only place in the House where raised paneling is found is in the front hall. The paneling is part of the wall beneath the stair.



Figure 39: Raised paneling in the front hall

Balusters: Both the front and rear stairs have turned balusters that are in good condition and look to be original.



Figure 40: Rear stair railings

Trim and Casing: The window casing is composed of simple +/-1” thick flat wood trim on heads and sides, plus a stool and +/-1” thick wood apron for the sill.

See glossary and Attachment G for a sketch showing the anatomy of a typical window.

The door casings also consist of flat +/-1” thick wood trim. Some doors have a back band.

There was no crown molding noted in any room.

Projecting timber beams have been cased with 1x trim with beaded corners.

The majority of the trim work is in fair condition. Window trim in certain locations has been water damaged.



Figure 41: Double-hung window in bedroom #3

Recommendations:

Priority 1 Task:

- Remove any rotten trim or casing and replace with new trim and casing to match existing species and profile.

Priority 2 Task:

- The woodwork should be repaired and repainted according to the National Park Service’s recommendations for the treatment of historic wood finishes. The woodwork most certainly is coated with lead paint, so the removal of the paint should follow ‘lead safe guidelines’ for historic properties. Make any required repairs and repaint.

Walls and Ceilings: The majority of interior walls are sheathed with plaster over wood lath. Ceilings are painted and walls in most rooms are covered with wall paper.

The condition of the majority of the plaster is good. There are few areas where the plaster has significantly cracked or failed. The exterior north wall of the House has serious moisture damage and

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

there is a significant amount of mold growing on the surface of the plaster. Mold is also present to a lesser extent in other areas of the House.

The wallpaper covering many of the walls of the House is in generally poor condition, and in many places, is peeling away from the walls.

The walls of the keeping room have plaster walls that are covered with painted horizontal wood wainscot that runs from the floor to chair rail height. The wainscot is in generally good condition.

The walls of the bathroom are clad in tile.



Figure 42: North wall of bedroom #1



Figure 43: North wall of north parlor

Recommendations:

Priority 1 Tasks:

- **North walls of Bedroom #2 and North Parlor:** Strip all plaster and lath from these walls inspect and make any required structural repairs. Reapply plaster and lath.
- Inspect other wall and ceiling areas where mold is present. Assess whether or not mold can be eradicated without removal of the plaster. Remove and replace areas of plaster where mold cannot be permanently removed.

- Repair any cracks in plaster that are encountered.

Priority 2 Tasks:

- **Wallpaper:** We do not believe the wall paper in the House dates back much further than the mid 20th century. Further research is required and a decision should be made to determine whether there is enough historic value to merit the preservation and restoration of the wall paper. If it turns out to not be historically significant, strip the wall paper from walls, prep, prime and paint the walls.
- **Ceilings:** Prep and repaint ceilings.
- **Bathroom Tile:** Remove existing damaged ceramic tile from bath room walls, and re-tile with new tile.

Floors:

Kitchen: The kitchen floor has a layer of linoleum over plywood. The linoleum and plywood subfloor are in very poor condition. Portions of the floor have exposed plywood. There is visible rot in several locations.



Figure 44: Deteriorating floor in kitchen

Living Room: The floor in the living room is maple strip and does not appear to date from the construction of the House.

South Parlor, Front Hall, and North Parlor: Floors in these rooms are oak strip and also not original. The oak strip has been installed above another layer of hardwood, which is over a subfloor that is visible from the cellar below.

The layer of wood flooring below the current top layer of strip oak floor may be wide hardwood boards, and if so, the strip oak should be removed and the older floor repaired and refinished. There is visible rot in the floor on the north side of the north parlor.



Figure 45: Oak strip floor in south parlor

Bathroom: The bathroom floor is covered with ceramic mosaic tile and is in poor condition.

Second Floor Bedrooms: The flooring found in all of the rooms on the second floor is painted wide plank hardwood of random widths ranging from 9” to 14”. Some of the rooms are covered with linoleum area rugs. The rugs are in poor condition, but could date back to the early 20th century so may be worth trying to preserve. The floors of bedroom #3 and the back stair landing are severely pitched, but seem otherwise stable.

The floor of bedroom #2 is also pitched. The floor is visibly rotted below the window on the north wall of the room.

Attic: The attic floor consists of unfinished wide plank hardwood of varying widths and is in relatively good condition.

Recommendations:

Priority 1 Tasks:

- **Kitchen:** Strip linoleum floor and plywood subfloor down to joists. Inspect and make any required repairs to the floor framing. Install new floor as desired, in keeping with the overall character of the House.
- **Bedroom #2 and North Parlor:** Strip rotted wood strip flooring from north side of rooms. Replace with new flooring to match existing.

Priority 2 Tasks:

- **Bathroom:** Remove existing damaged tile floor and retile.
- **First Floor Rooms:** Sand and refinish oak and maple strip floors with two coats of polyurethane, according to the National Park Service’s standards for the treatment of historic wood finishes.
- **Second Floor Rooms:** Refinish and repaint the painted wood strip floor boards according to the National Park Service’s recommendations for the treatment of historic wood finishes. The floors most certainly are coated with lead paint, so the removal of the paint should follow ‘lead safe guidelines’ for historic properties.

Plumbing System:

Assessment:

- The House is connected to the town water supply and sewer system. The water supply line appears to enter the House through the “Bilco” hatch on the north side. The water line was exposed and wrapped with an electric heat trace device and insulation to prevent freezing.
- The bathroom is plumbed with a wall mounted sink, 5-foot bathtub and a toilet. We were not able to get very far into the crawl space below the House to inspect the rough plumbing, as the dirt and debris had accumulated up to the bottom of the framing, so a more thorough inspection will be required to verify if it is working condition. This is also true for the plumbing for the sink and washing machine in the kitchen. There is rough plumbing for a sink on the east wall of bedroom #3. The kitchen and the bathroom appear to be properly vented.



Figure 46: Water line entering crawl space on north side of the House

Priority 1 Task:

- Hire a licensed plumber to inspect the existing plumbing system. Make any necessary repairs.
- The water supply line is exposed and although it has been insulated and wrapped with heat tape, it is vulnerable to freezing and should be rerouted to enter the House sufficiently below grade and into a heated portion of the House.

Priority 2 Task:

- Replace the plumbing fixtures in the kitchen and bathroom, if desired.

Priority 3 Task:

- Install dishwasher, if desired.

Mechanical System:

Assessment:

The House is heated by gas fired furnace (Trane XE70) located in the cellar and a distribution system of metal ducts. Gas is supplied from the street.

There is a gas-fired hot water heater (A.O. Smith) also located in the cellar.



Figure 47: Mechanical System in cellar

Recommendation:

Priority 1 Task:

- **Furnace:** The existing furnace is approximately 20 to 25 years old. It should be inspected by an HVAC (Heating, Ventilation & Air-Conditioning) contractor. If it still works, its efficiency should be evaluated against a new furnace.

Electrical System:

Assessment:

The electrical service is supplied from the street with an overhead line which attaches to the northwest corner of the House, then runs through a rusting metal conduit along fascia on the west side of the House, down the southwest corner, along the south base of the House and into the building.

The service is comprised primarily of an 80 amp fuse box, but a smaller circuit breaker subpanel was also identified.

There is BX cable running from the fuse box and Romex running from the circuit breaker subpanels.

Some cloth covered wiring was noted in the cellar, but may no longer be connected to the current system.

The distribution of power is extensive for a house of this vintage. Duplex outlets and wall sconces exist throughout the House.

No smoke or carbon monoxide detectors were noted.



Figure 48: Electrical Panel



Figure 49: Fuse Box



Figure 50: Electrical conduit running down corner board

Recommendations:

Priority 1 Task:

- **Electrical System:** The existing electrical system does not meet current electrical code and will need to be modified or updated as required to meet code prior to reactivation of the system.
 - A licensed electrical contractor should be hired to conduct an inspection, followed by a detailed plan for what will be required to bring the system up to code.
 - Install smoke and carbon monoxide detectors.

Priority 3 Task:

- The ceiling and wall sconces are of poor quality. Some are damaged and have no historic value. They should be replaced as desired.

GARAGE



Figure 51: Garage

Foundation:

Assessment:

The foundation of the Garage consists of 8" concrete block and appears sound. Portions of the stucco facing have flaked off.

Recommendations:

Priority 3 Task:

- Reparge the exposed exterior face of the foundation walls as required.

Framing:

Assessment:

The Garage is 'stick built' and appears to be in good condition. No rot was evident.

The roof is framed with 2"x6" (nominal dimension) rafters spaced 16" on center.

The ceiling consists of 2"x6" joists spaced 16" on center.

The walls are framed with 2"x4" studs at 16" on center.



Figure 52: Interior of Garage (southeast corner)

Recommendations:

The frame is in good shape and structurally sound, we have no recommendations other than that the attic framing is not sized for storage.

Roofing & Drainage:

Assessment:

The existing roof is 3-tab asphalt shingles over plywood sheathing. It is in poor condition.

The Garage has no gutters.



Figure 53: North side of Garage

Recommendations:

Priority 2 Task:

- **Roof:**
 - Strip existing asphalt shingles from the roof.
 - Install new 30-year fiberglass ‘Architectural’ shingles over 30# felt building paper to match shingles on the House.
 - Alternative option is to install red cedar shingles over ‘cedar breather’ over 30# felt building paper.
- **Gutters:** Install new half round white baked aluminum gutters and leaders to match gutters on House. Connect leader drains to a new underground drainage system.

Siding & Wood Trim:

Assessment:

The Garage is sheathed with ‘novelty siding’ attached directly to the 2”x4” studs. The windows and doors are cased with 5/4 x 4 trim. The paint finish on the siding and trim is flaking off throughout.

The base of the garage and side door casings have wicked moisture and are rotting.

The head casing of the windows is deteriorated from moisture.



Figure 54: Detail of garage trim and novelty siding

Recommendations:

Priority 1 Task:

- **Siding:**
 - Remove and replace any rotted sections of novelty siding with new pre-primed siding to match.
 - Repaint siding according to the National Park Service’s recommendations for the treatment of historic wood finishes.
- **Casing:** Cut away the rotted sections of casing and scarf on new casing to match existing. Prime all cut ends before installing new trim. New casing should not be in contact with masonry or ground.

Doors and Windows:

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Assessment:

The windows are wood framed, double hung and appear to be in good condition.

The Garage doors have deteriorated. We did not try to open the southern Garage door, but had difficulty with the door on the north side.

The sill of the side door has rotted out.

Recommendations:**Priority 1 Tasks:**

- Replace or repair garage doors and tracks.
- Replace side door sill.

Priority 2 Task:

- Repaint doors according to the National Park Service's recommendations for the treatment of historic wood finishes.

Electrical:**Assessment:**

There is electricity in the garage in the form of duplex outlets on each wall. BX cable runs from the outlets. The power to the garage once came from the House through an overhead line. The line has since been cut and the wire is laying the roof of the garage.

Recommendations:**Priority 1 Task:**

- The garage electrical system in conjunction with the House needs to be inspected by a licensed electrical contractor.

Priority 2 Task:

- Restore power supply to the garage from the House. The new power line should be installed through a buried conduit rather than strung overhead.

ALTERNATIVE USE FEASIBILITY

The Smith-Curtiss House, when restored, will once again be a very suitable building for use as a residence. However it would not be impossible to convert the House so that it could accommodate a public use (i.e. Historical Museum, office space, or Nature Center). If the space is intended for a public use, consideration must be made for accessibility and life safety compliance.

Accessibility: The Americans with Disabilities Act (A.D.A.) is a civil law enacted in 1990 which among other things, requires that any publicly used facility be accessible to persons with physical disabilities.

In order for the Smith-Curtiss House to comply with the requirements of ADA, the following additions and modifications would be necessary:

- Develop designated Handicapped parking with signage and markings in the pavement
- Develop an accessible path to the Smith-Curtiss House that would include a wheelchair accessible ramp
- Widen doors as required (minimum of 36" wide) to allow passage of wheelchairs
- Install ADA complying levers on doors
- Provide proper hallway and door clearances
- Remodel bathroom to accommodate wheelchairs, following the specific design rules prescribed by ADA

Because of the historic nature of the Smith-Curtiss House, accessibility may not be required on the second floor, as long as the functions that would occur on the second floor could be replicated on the accessible first floor.

Life Safety: The existing stairs in the Smith-Curtiss House do not meet the current code requirements for egress stairs. Modifications to the existing stairway to meet life safety codes would be both harmful to the historic fabric of the buildings and very costly.

The installation of Exit signs and emergency lighting would be required.

The House has three potential means of egress from the first floor.

An alternative to modifications to the egress stairways is the installation of a fire suppression sprinkler system. The sprinkler heads could be capped flush into walls and ceilings so as to not be visibly obtrusive.

Smith-Curtiss House	-	-	-	-
411 Hawthorne Avenue	-	-	-	-
Conditions Assessment Report	-	-	-	-
Opinion of Probable Cost	-	-	-	-
** These cost estimates are based on anecdotal evidence from past Faesy-Smith projects and do not necessarily reflect actual costs.**				
CSI DIVISION	Priority One	Priority Two	Priority Three	Alternate Use
Scope of Work	Immediate Need	Year 2-3	Year 3-5	Year 2-5
Division 1- GENERAL REQUIREMENTS				
General Conditions 20%	\$ 58,960.00	\$ 46,440.00	\$ 7,100.00	\$ 15,840.00
Overhead & Profit 12%	\$ 35,376.00	\$ 27,864.00	\$ 4,260.00	\$ 9,504.00
Division 2- EXISTING CONDITIONS				
Test for presence of Lead Paint	\$ 3,000.00			
Test for presence of Asbestos	\$ 3,000.00			
Pest Control	\$ 1,500.00			
Inspect existing Plumbing and Electrical	\$ 1,000.00			
Deactivate electrical system, set up temporary power	\$ 2,500.00			
Additional framing assessment	\$ 2,500.00			
Strip plaster from walls and ceiling on North side of house				
to expose frame for inspection	\$ 4,500.00			
Strip siding from entire north side of house to expose				
frame for inspection	\$ 2,500.00			
Division 3- CONCRETE				
Install new concrete block foundation on east side of the cellar	\$ 4,000.00			

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Install new concrete piers as required to support existing framing	\$ 12,000.00			
Pour concrete rat slabs in the Crawl Spaces	\$ 10,000.00			
Division 4- MASONRY				
Re-point foundation	\$ 11,000.00			
Inspect and clean chimney flues, fireboxes and cleanouts	\$ 3,000			
Remove and reinstall stone landing for portico and steps over proper foundation	\$ 8,500.00			
Re-grout loose granite veneer to fieldstone foundation	\$ 4,000.00			
Division 6- WOOD AND PLASTICS				
Expose sills from exterior for assessment and repair	\$ 5,000			
Patch & replace deteriorated clapboard and trim as needed	\$ 13,000.00			
Restore existing portico	\$ 7,500.00			
Replace stair down to Cellar from the Kitchen		\$ 3,500.00		
Treat existing wood framing to inhibit mold growth	\$ 800.00			
Repair or replace any deteriorated interior trim		\$ 10,000.00		
Repair wood floors as required	\$ 5,000.00			
Replace & repair existing framing as required	\$ 50,000.00			
Repair low wood picket fence		\$ 1,000.00		
Division 7- THERMAL/MOISTURE PROTECTION				
Replace chimney cap on fieldstone chimney		\$ 2,500.00		
Repair top of brick chimney and cap		\$ 1,500.00		
Construct underground drainage system & connect leaders to it		\$ 6,500.00		

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Install new spray foam insulation to cover entire heated envelope		\$ 12,000.00		
Optional task: Replace existing fiberglass roof with new cedar shingle roof			\$ 15,000.00	
(note: this is strictly an aesthetic choice. Existing fiberglass roof is in excellent condition)				
Division 8- DOORS AND WINDOWS				
Remove exterior doors, refurbish, and re-install *	\$ 3,500.00			
Replace two non historic doors as noted in report			\$ 500.00	
Remove and refurbish interior doors*		\$ 12,000.00		
Remove existing windows, refurbish and re-install*	\$ 40,000.00			
Construct and install new shutters where they once existed			\$ 3,500.00	
Repair or replace 'Bilco' hatches	\$ 2,500.00			
Provide accessible entrance				\$ 4,500.00
Install fire doors				\$ 2,500.00
Remove and replace plywood subfloor in Kitchen			\$ 2,000.00	
Install ADA levers on doors				\$ 3,500.00
Construct and install historically appropriate storm panels over all windows		\$ 8,500.00		
Note: Items with an "*" do not include any lead abatement costs				
Division 9- FINISHES				
Prep and paint exterior of house*	\$ 40,000.00			
Repair or replace plaster as required		\$ 7,000.00		
New tile in Bath & Kitchen		\$ 4,200.00		
Prep and paint interior of house*		\$ 30,000.00		
Prep and refinish all wood flooring*		\$ 6,900.00		
Note: Items with an "*" do not include any lead abatement costs				

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

Division 10- SPECIALTIES				
Install lightning protection system			\$ 4,500.00	
Division 11- EQUIPMENT				
Provide and install Kitchen & Laundry appliances		\$ 6,500.00		
Division 12 – FURNISHINGS				
Provide and install new Kitchen cabinets and counters			\$ 15,000.00	
Restore existing builtin cabinetry to remain		\$ 5,000.00		
Division 22 – PLUMBING				
Replace existing plumbing fixtures in Bath and Kitchen		\$ 6,000.00		
Update and repair rough plumbing as required		\$ 10,000.00		
Install de-humidification system in the Cellar		\$ 1,500.00		
Replace existing gas fired furnace		\$ 4,500.00		
Repair or replace existing ductwork as required		\$ 15,000.00		
Install Sprinkler System				\$ 40,000.00
Renovate Bath to meet ADA requirements				\$ 20,000.00
Division 26 - ELECTRICAL				
Replace and upgrade existing electrical system as required to meet current code	\$ 45,000.00			
Provide all new electrical fixtures			\$ 6,000.00	
Install emergency lights and exit signs				\$ 3,000.00
Division 27 – COMMUNICATIONS				
Install phone and cable lines		\$ 4,500.00		
Division 28 - ELECTRONIC				

Smith-Curtiss House Complex

Osbornedale State Park
411 Hawthorne Avenue
Derby, CT 06418

Conditions Assessment Report

Prepared for:
Connecticut Department of
Environmental Protection
79 Elm Street
Hartford, CT 06106

SAFETY				
Install hardwired fire detection system		\$ 5,000.00		
Install carbon monoxide detectors		\$ 600.00		
Division 31 – EARTHWORK				
Excavate crawl spaces	\$ 10,000.00			
Division 32 - EXTERIOR IMPROVEMENTS				
Remove or prune overgrown vegetation				
(install new topsoil and seed disturbed areas)	\$ 2,500.00			
Dead limb trees	\$ 2,000			
Provide designated H.C. parking				\$ 1,200.00
Provide accessible exterior route				\$ 4,500.00
Re-surface the driveway (Option B)		\$ 12,000.00		
Repair retaining walls	\$ 7,000			
Remove old garden fence			\$ 500.00	
New landscaping			\$ 10,000.00	
Re-grade on east side of house, re-install fieldstone patio	\$ 9,000			
Division 33- UTILITIES				
Provide new 200 amp service		\$ 3,000.00		
BUILDING RESTORATION	\$ 410,136.00	\$ 253,504.00	\$ 68,360.00	\$ 104,544.00
CONTINGENCY 15%	\$ 55,370.40	\$ 47,400.75	\$ 7,029.00	\$ 15,681.60
A&E FEES 12%	\$ 44,296	\$ 37,920.48	\$ 5,623.20	\$ 12,545.28
TOTAL CONSTRUCTION COST	\$509, 802.72	\$338,825.23	\$81,012.20	\$132,770.88

<u>Smith-Curtiss Garage</u>			
<u>411 Hawthorne Avenue</u>			
<u>Conditions Assessment Report</u>			
<u>Opinion of Probable Cost</u>			
** These cost estimates are based on anecdotal evidence from past Faesy-Smith projects and do not necessarily reflect actual costs.**			
CSI DIVISION	Priority One	Priority Two	Priority Three
Scope of Work	Immediate Need	Year 2-3	Year 3-5
Division 1- GENERAL REQUIREMENTS			
General Conditions 20%	\$ 4,750.00	\$ 1,200.00	\$ 140.00
Overhead & Profit 12%	\$ 2,850.00	\$ 720.00	\$ 84.00
Division 2- EXISTING CONDITIONS			
Test for presence of Lead Paint	\$ 3,000.00		
Division 4- MASONRY			
Re-parge exposed foundation wall as required			\$ 700.00
Division 6- WOOD AND PLASTICS			
Patch & replace deteriorated clapboard and trim as needed	\$ 2,500.00		
Division 7- THERMAL/MOISTURE PROTECTION			
New gutters to match house and connected to underground drains		\$ 2,500	
Strip existing roof and install new roof to match house			\$ 3,500.00
Division 8- DOORS AND WINDOWS			
Remove and replace existing garage doors	\$ 4,000.00		
Repair windows as required, prep and paint*	\$ 2,000.00		
Repair 'man door'	\$ 500.00		
Note: Items with an "*" do not include any lead abatement costs			

Smith-Curtiss House Complex

Osbornedale State Park
 411 Hawthorne Avenue
 Derby, CT 06418

Conditions Assessment Report

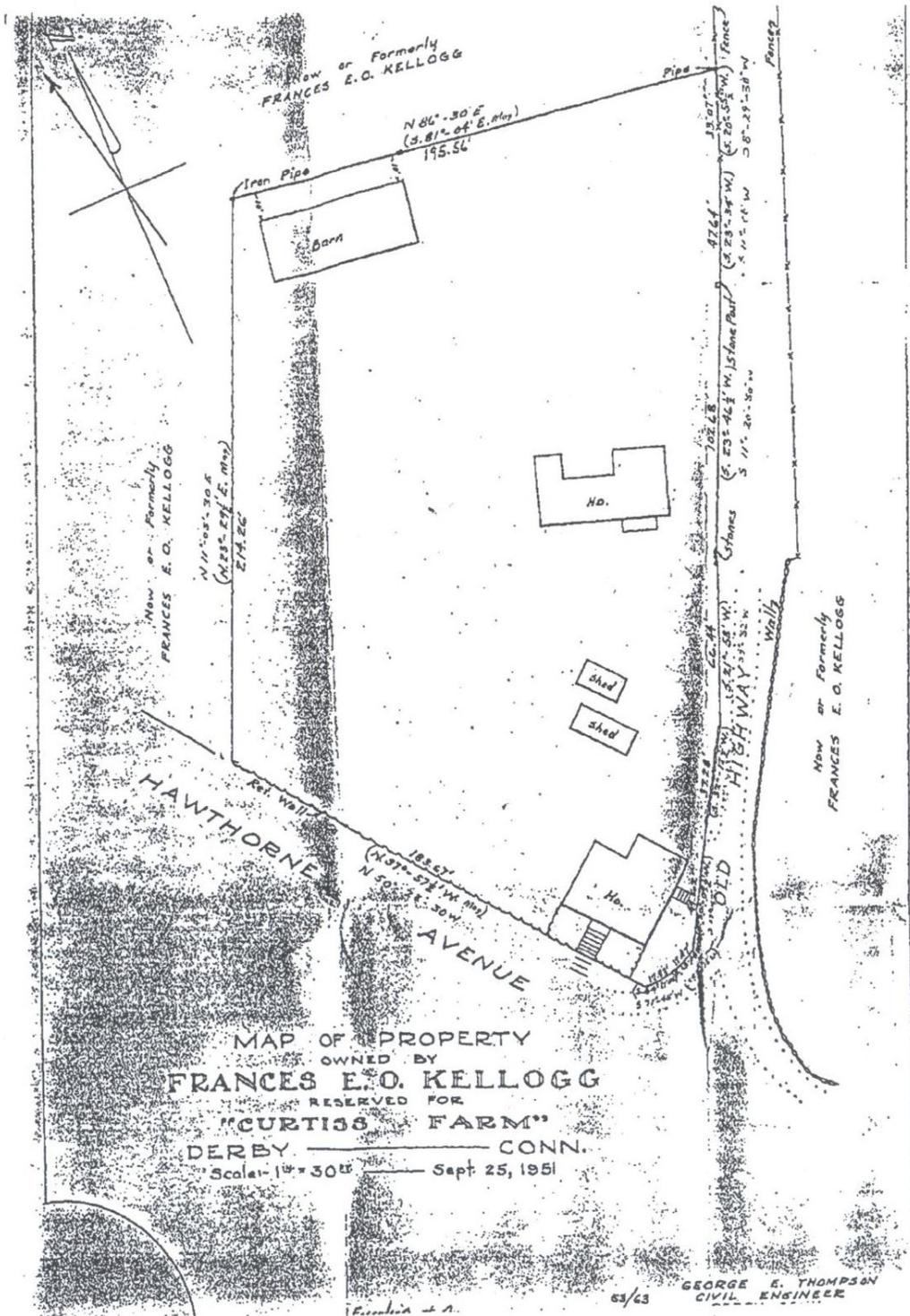
Prepared for:
 Connecticut Department of
 Environmental Protection
 79 Elm Street
 Hartford, CT 06106

Division 9 – Finishes			
Prep and paint exterior of Garage*	\$ 5,000.00		
Note: Items with an "*" do not include any lead abatement costs			
Division 26 - ELECTRICAL			
Reconnect power from house to Garage via underground conduit	\$ 4,000.00		
Replace exterior flood lights	\$ 250.00		
Division 31 – EARTHWORK			
Pull grade away from east side of Garage	\$ 2,000.00		
Division 32 - EXTERIOR IMPROVEMENTS			
Remove or prune overgrown vegetation	\$ 500.00		
BUILDING RESTORATION	\$ 31,350.00	\$ 4,420.00	\$ 4,424.00
CONTINGENCY 15%	\$ 4,702.50	\$ 1,188.00	\$ 138.60
A&E FEES 12%	\$ 3,762	\$ 950.40	\$ 110.88
TOTAL CONSTRUCTION COST	\$ 39,814.50	\$ 6,558.40	\$ 4,673.48

ATTACHMENTS
for the
Smith-Curtiss House and Property
Conditions Assessment

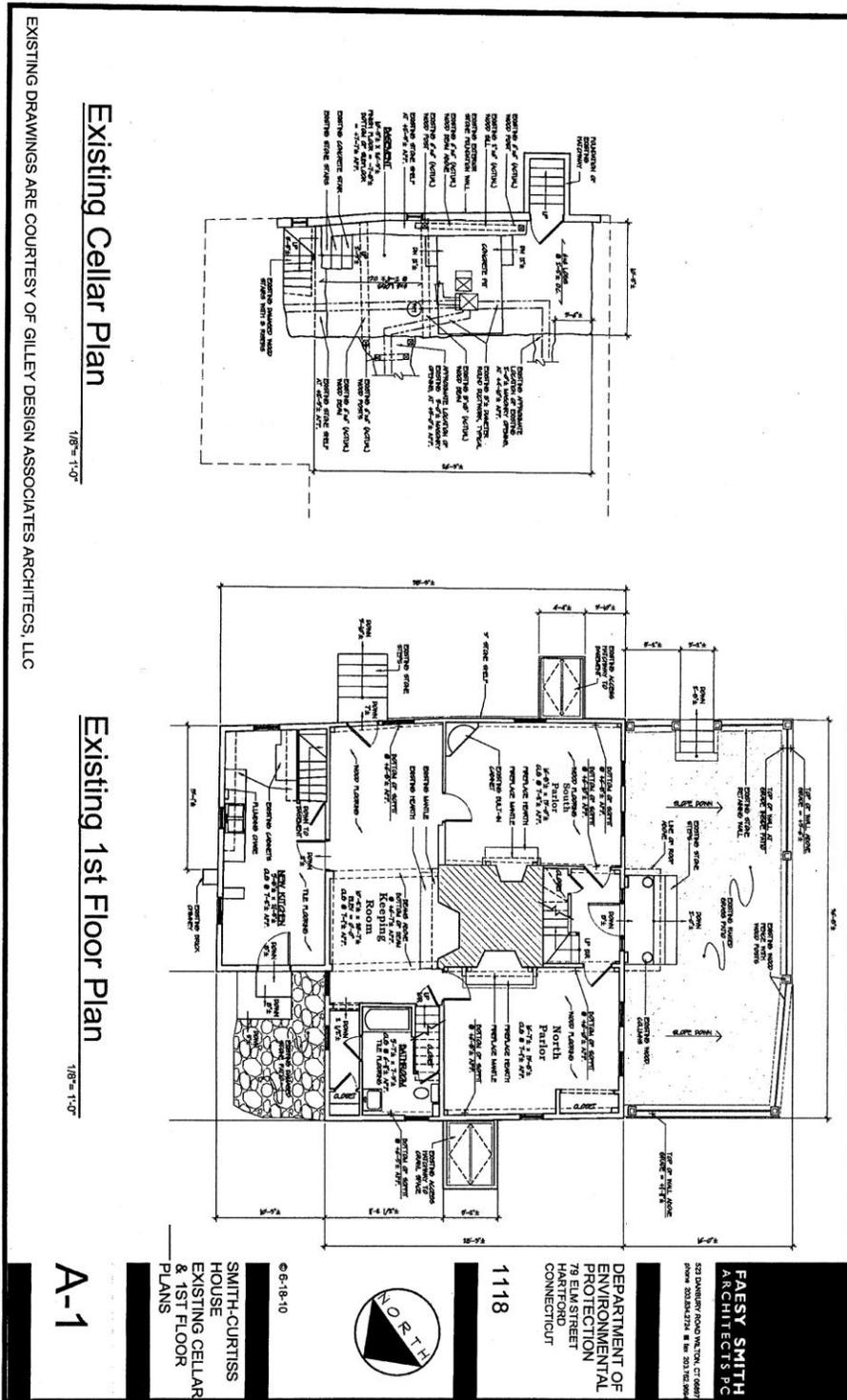
- A. Location of property on FW Beers Atlas of Derby, Ct. Dated: 1868
- B. Site Plan of property Date: Sept. 25, 1951
- C. Drawings of Existing Floor Plans and Elevations
- D. Drawing SK-1 Smith-Curtiss House – Probable Sequence of Expansion
- E. Sketch of typical “rain screen” application
- F. Sketch of example of a historically appropriate storm panel
- G. Sketch of typical interior window trim

ATTACHMENT B

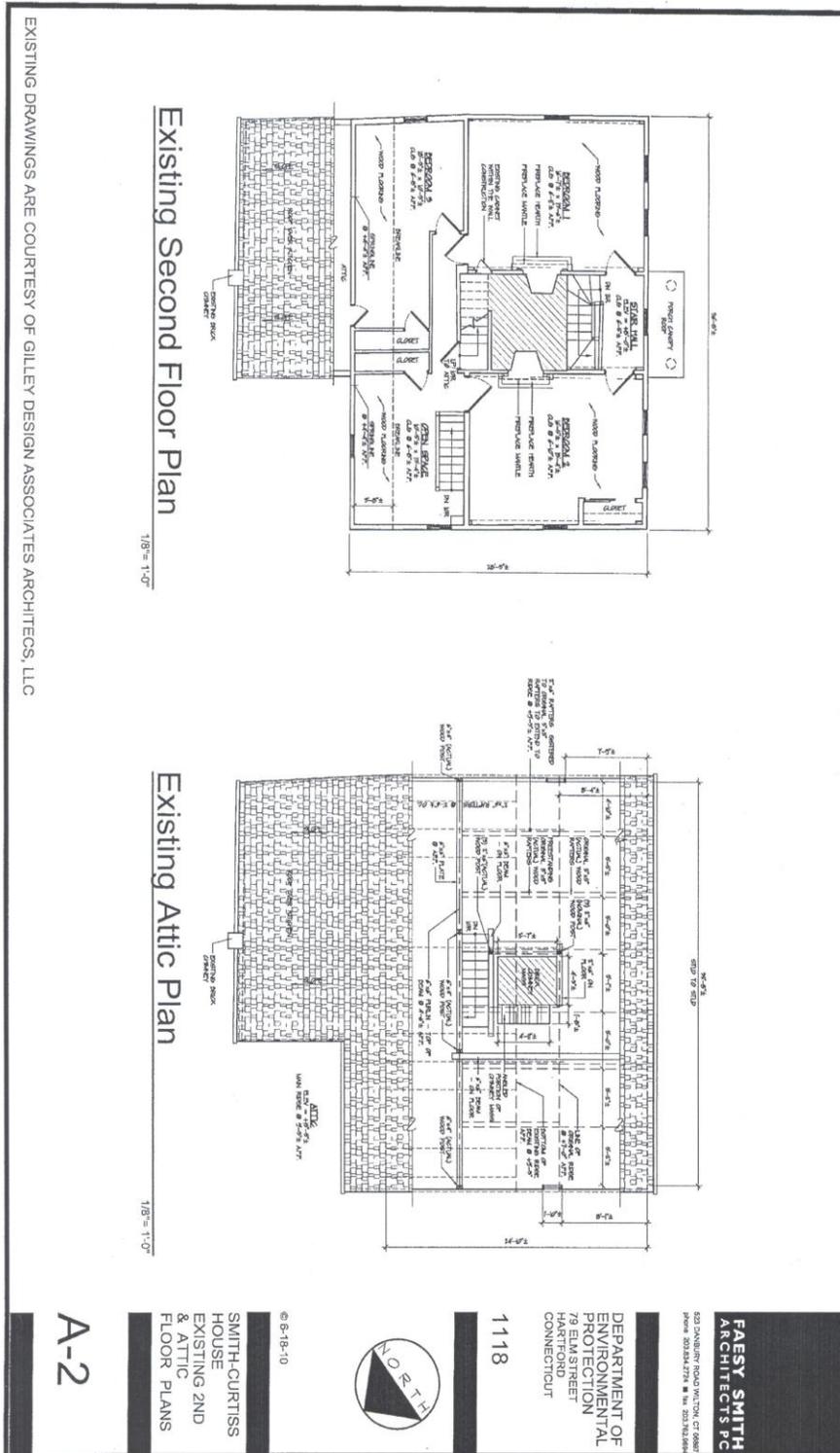


Site Plan of property Date: Sept. 25, 1951

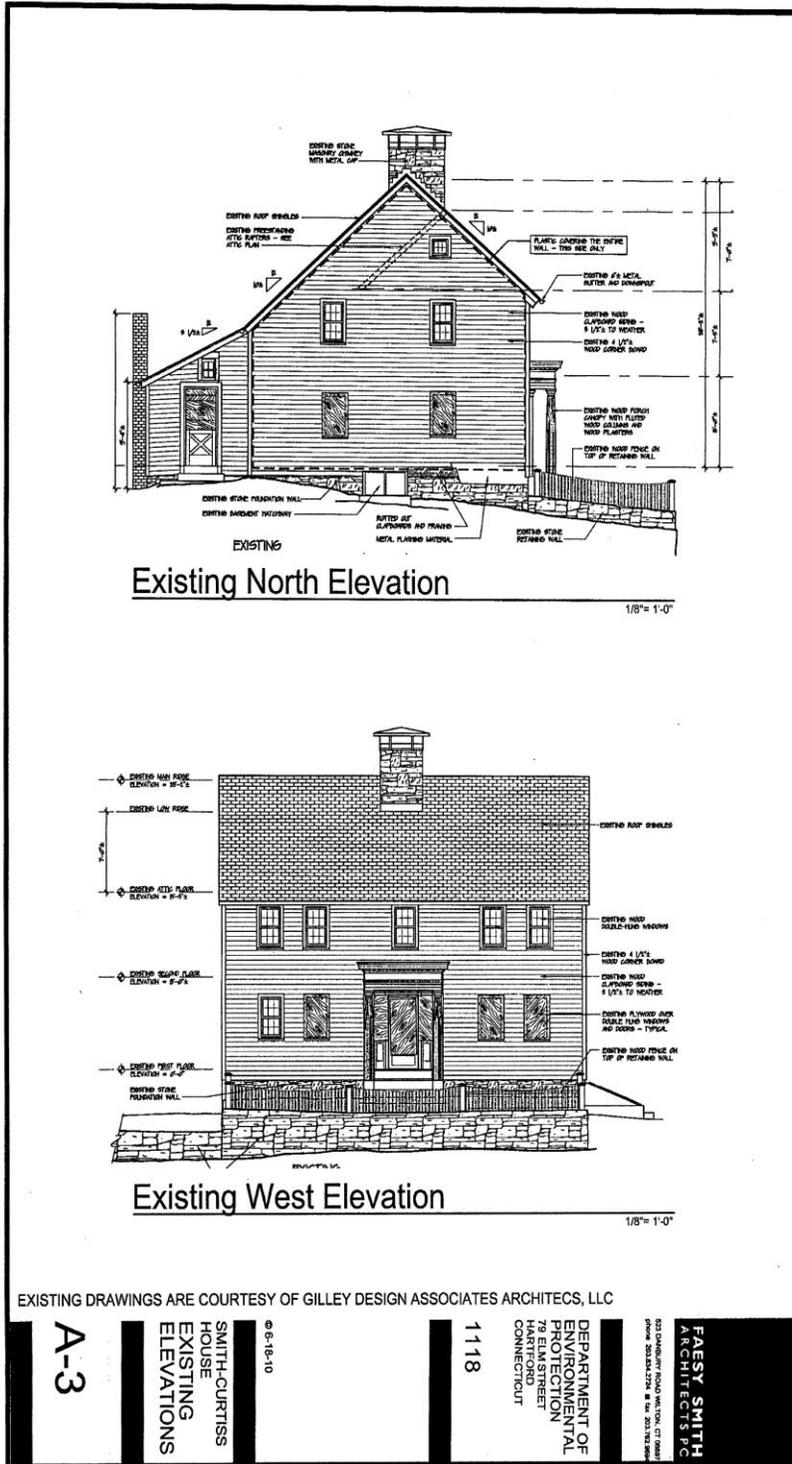
ATTACHMENT C



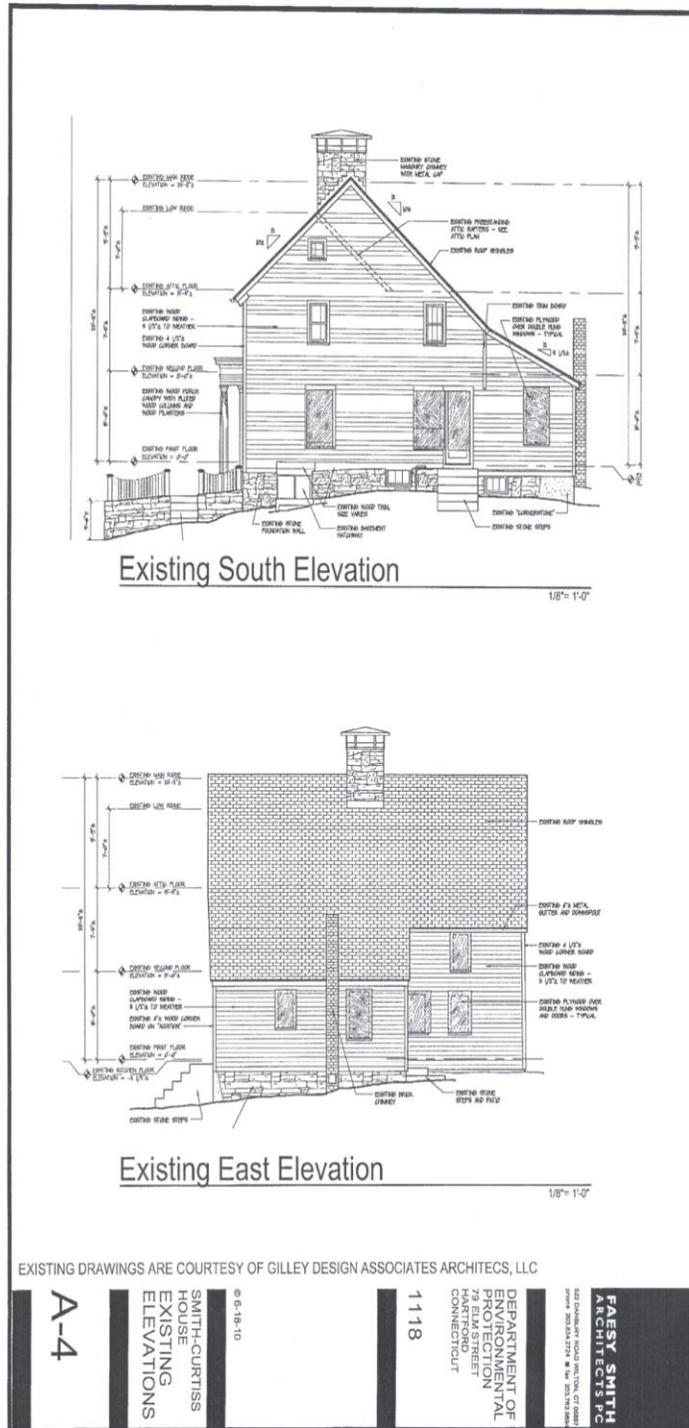
Drawings of Existing Floor Plans and Elevations



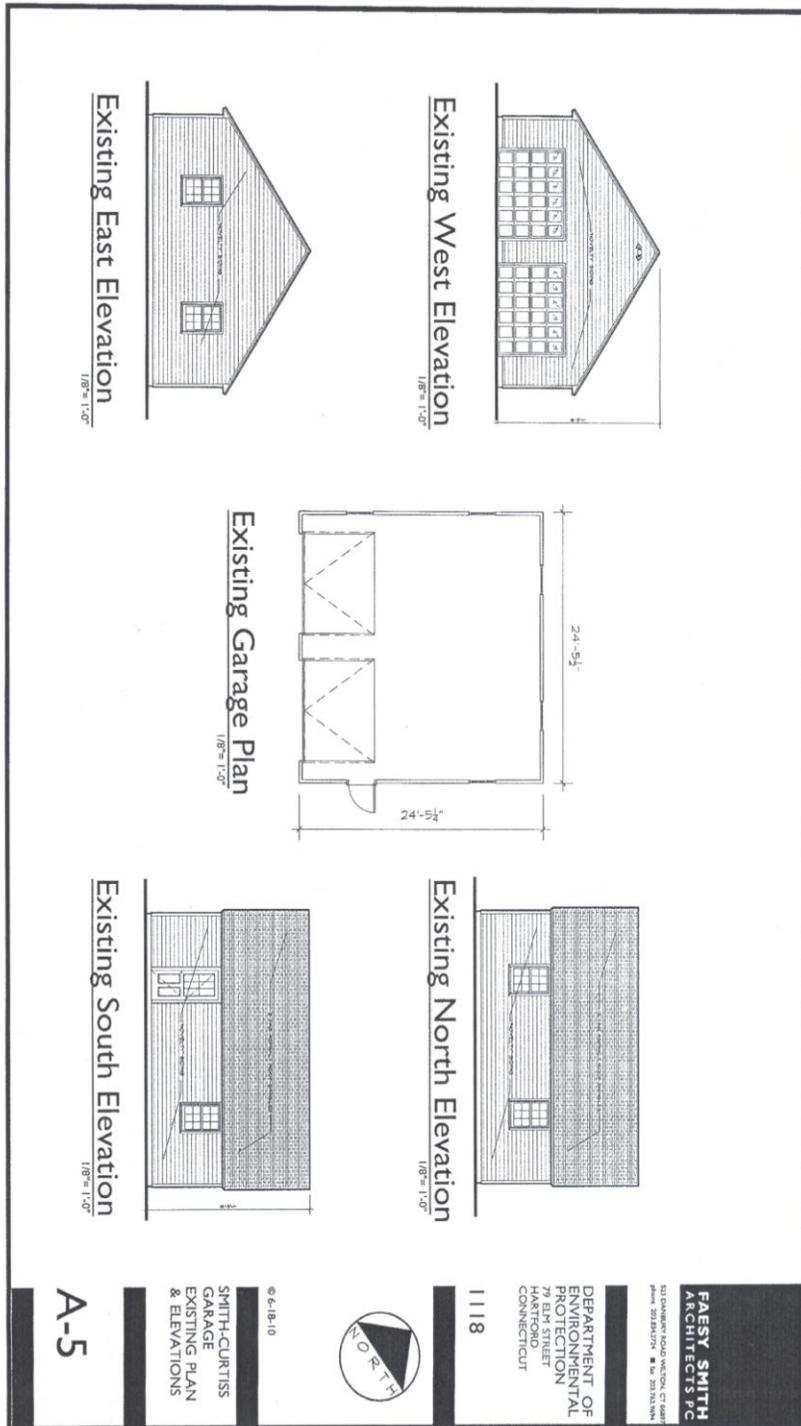
Drawings of Existing Floor Plans and Elevations



Drawings of Existing Floor Plans and Elevations

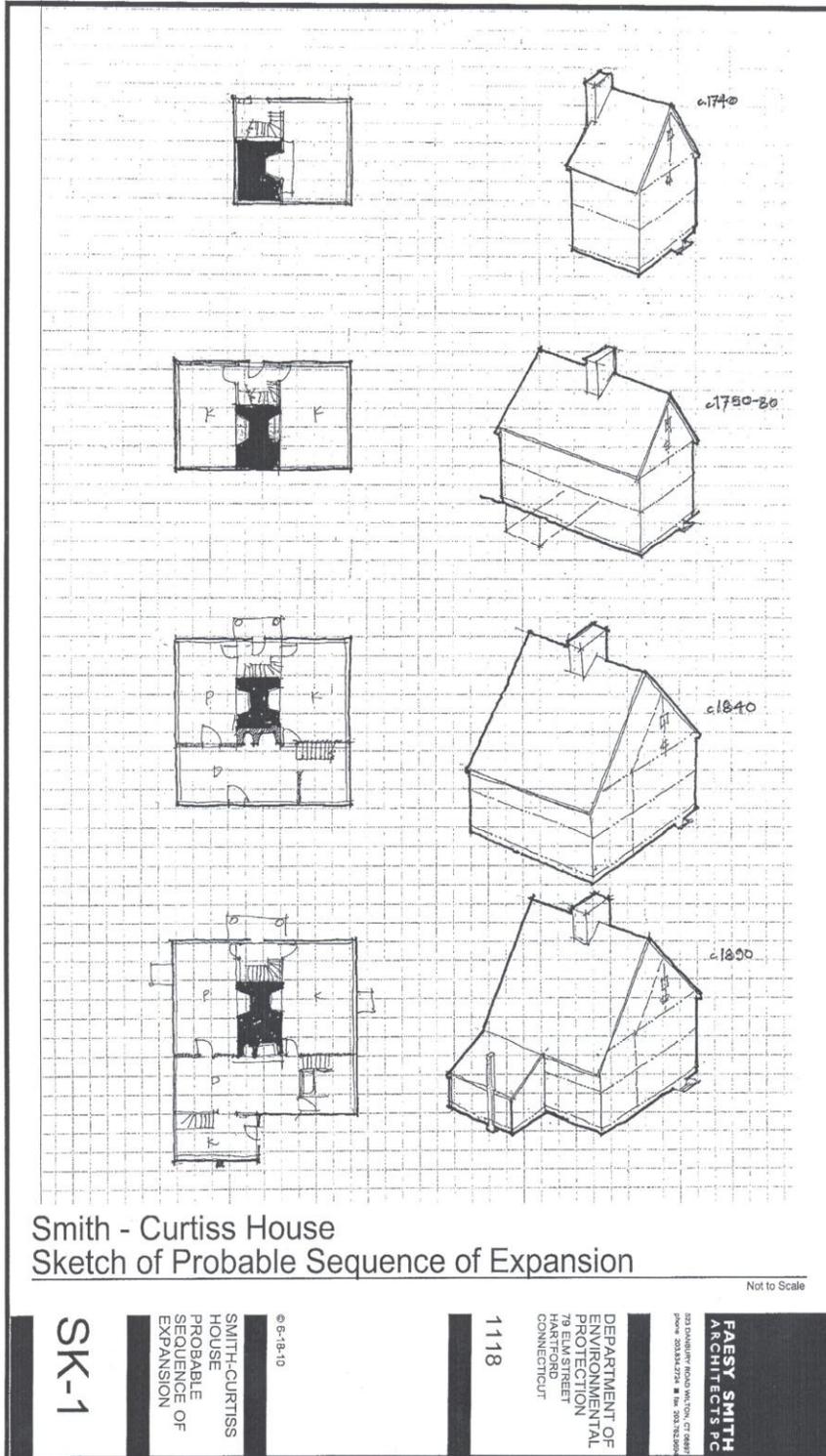


Drawings of Existing Floor Plans and Elevations



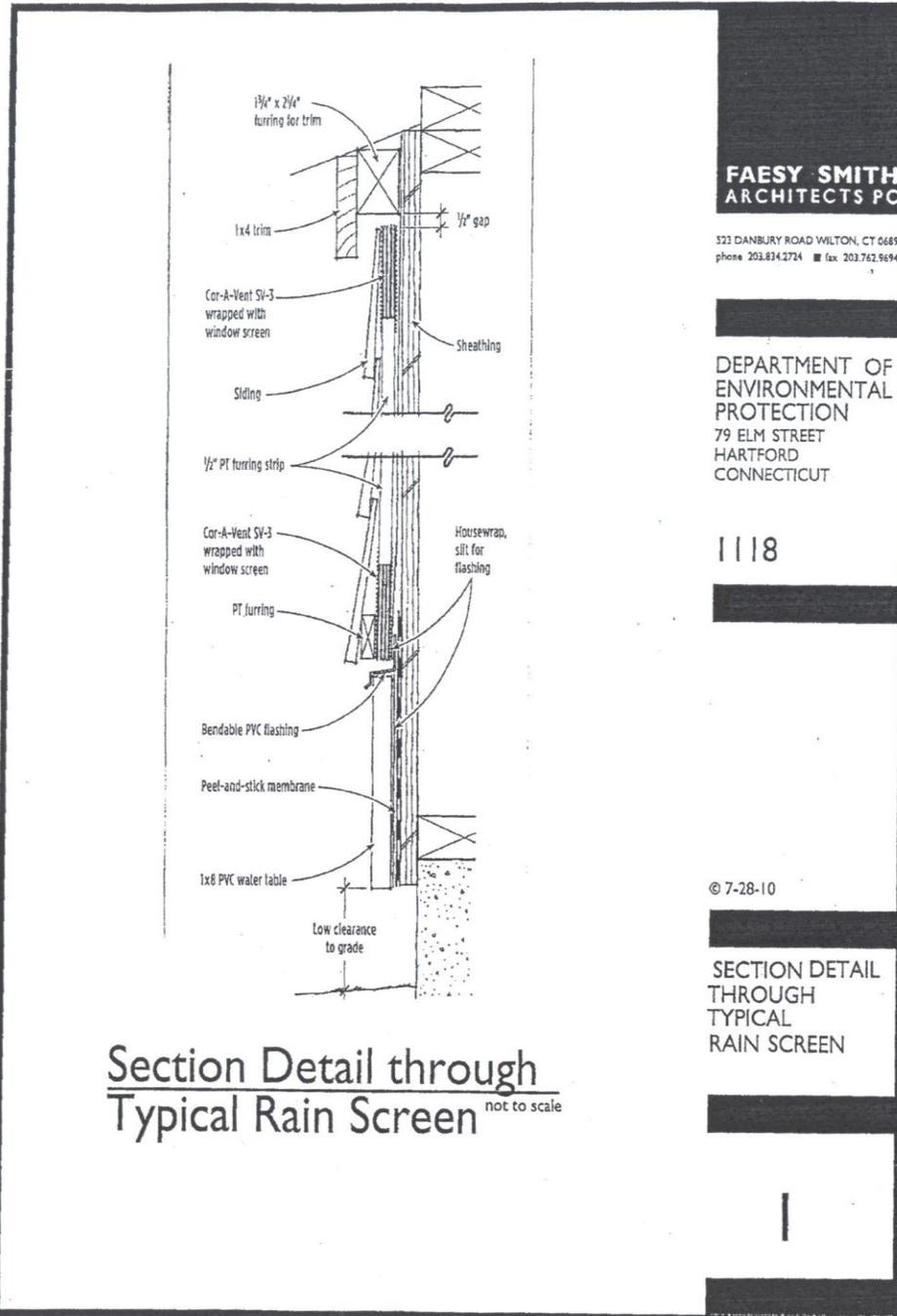
Drawings of Existing Floor Plans and Elevations

ATTACHMENT D



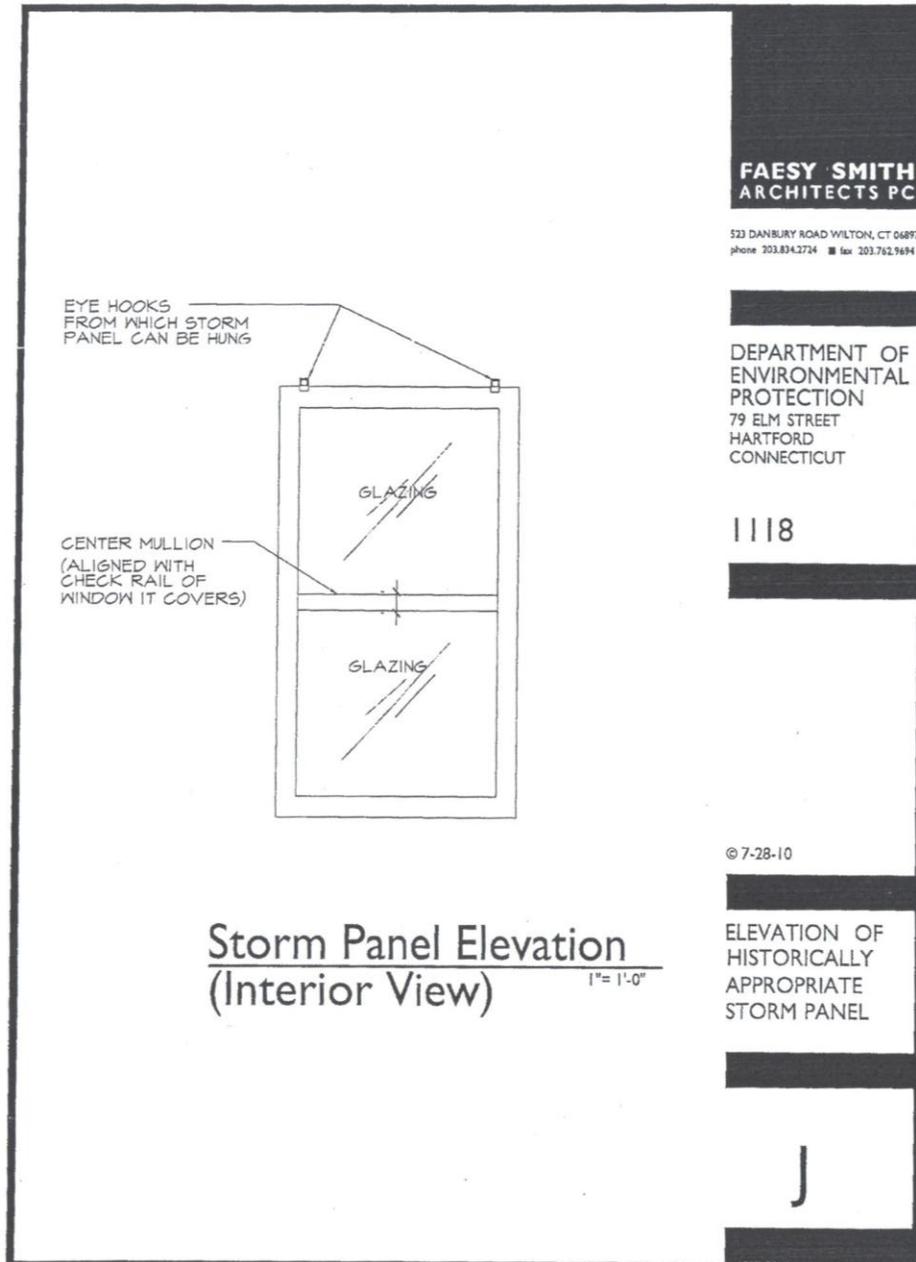
Drawing SK-1 Smith-Curtiss House – Probable Sequence of Expansion

ATTACHMENT E



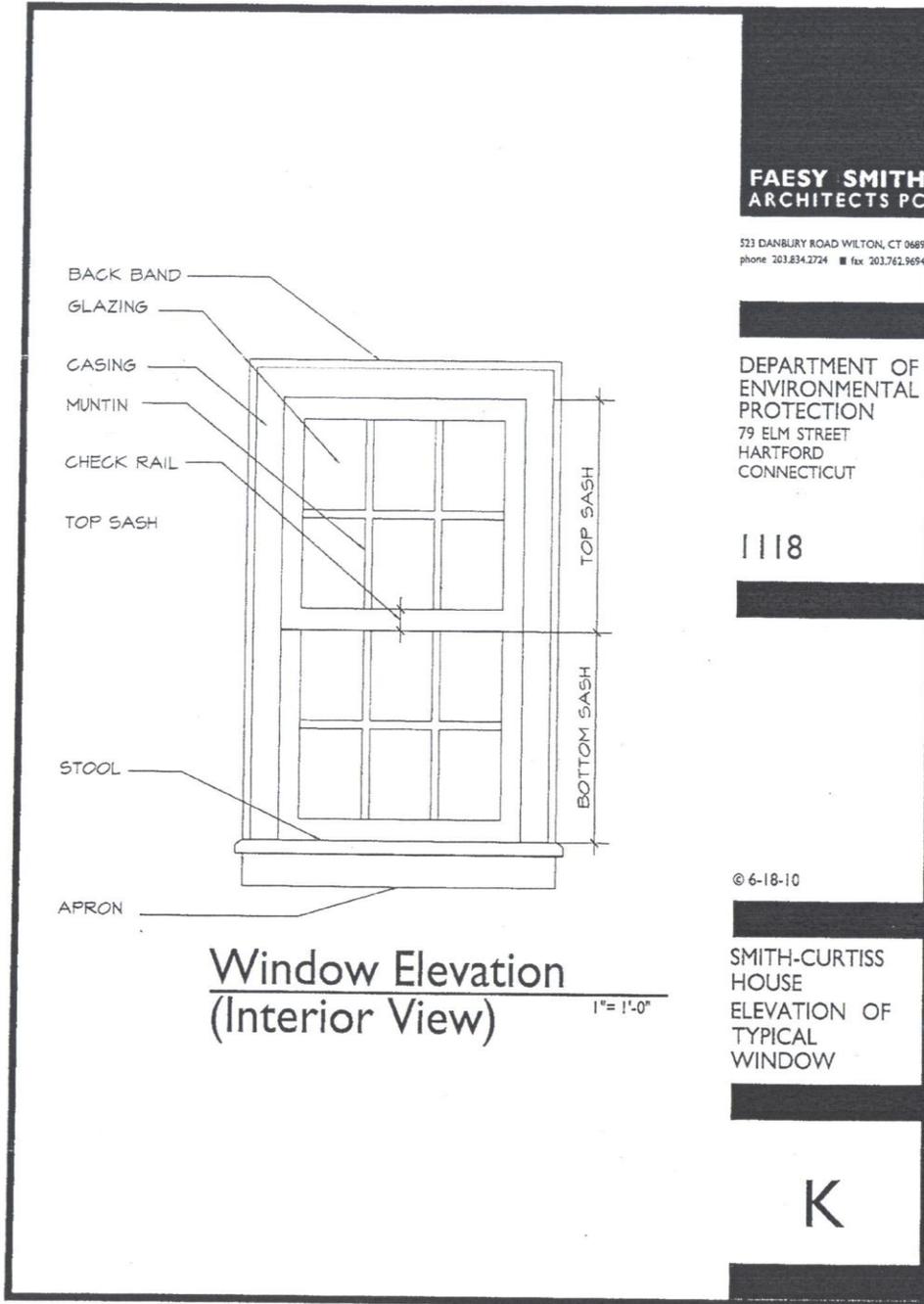
Sketch of typical "rain screen" application

ATTACHMENT F



Sketch of example of a historically appropriate storm panel

ATTACHMENT G



Sketch of typical interior window trim