

**TOWN OF WATERFORD - DPW FACILITIES
CAPITAL IMPROVEMENT PLAN
PROJECT CONSOLIDATION FORM-FY 2022-2026**

	DEPARTMENT/ AGENCY: DPW / Facilities								
DEPT PRIORITY	PROJECT NAME	FUNDIN G SOURCE	FISCAL YEAR 2021 2022	FISCAL YEAR 2022-2023	FISCAL YEAR 2023- 2024	FISCAL YEAR 2024-2025	FISCAL YEAR 2025-2026	TOTAL	
1	Underground Tank Replacement	1	\$ 250,000.00					250,000.00	
2	Tower	1	60,500.00					60,500.00	
3	Southwest School	1	106,000.00					106,000.00	
4	Eugene O'Neill Roof	1	35,000.00					35,000.00	
5	Nevins Cottage	3	150,000.00					150,000.00	
								0.00	
								0.00	
	TOTALS		601,500.00	0.00	0.00	0.00	0.00	601,500.00	

INDEX TO FUNDING SOURCES.

- 1 CURRENT YEAR CAPITAL IMPROVEMENTS
- 3 UTILITY BUDGET/SEWER CAPITAL MAINTENANCE FUND
- 3 TRANSFER TO CAPITAL & NONRECURRING.
- 4 SHORT AND LONG TERM DEBT FINANCING
- 5 LoCIP
- 6 CNR UNDESIGNATED FUND BALANCE
- 7 FEDERAL/STATE GRANTS
- 8 OTHER FUNDING

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

To: Robert Brule, First Selectman
From: Gary Schneider, Director of Public Works
Date: November 13, 2020
Re: CIP 2022 – 2026 - Facilities

These CIP projects, except for the underground replacements, were prepared in partnership with the Planning Department Director. Public Works was assigned the Facilities responsibilities in October of 2020. We are just beginning the process of understanding all the currently funded projects and what each building will require for capital improvements in the future.

Cc: Kim Allen, Finance Director

**TOWN OF WATERFORD
CAPITAL PROJECT REQUEST FORM**

DEPARTMENT/AGENCY <u>Facilities</u>	CONTACT PERSON <u>Gary J. Schneider</u>
PROJECT NAME <u>Underground Tank Replacement</u>	DEPARTMENT PRIORITY <u>1</u>

1	DESCRIPTION AND JUSTIFICATION (describe the type, purpose & anticipated accomplishments of the project)
Underground storage tanks must be removed when they have reached their service life. The Town has several locations that will require the existing to be removed and if natural gas is not available, an above ground tank installed. Not only does the tank need to be removed, all the underground piping and soil testing must be completed to properly close out the removal. This requires the certification of a LEP. The locations are: • Police Station (2 tanks) • Emergency Management	

2	PROJECT STATUS IF IN PROGRESS
LEP prepared a status report estimate price ranges	

3	LIST OTHER PROJECTS WITHIN YOUR DEPARTMENT OR ANOTHER DEPARTMENT THAT WILL BE IMPACTED BY THIS REQUEST
None	

4	DESCRIBE THE IMPACT ON DEPARTMENT OPERATING BUDGET (include cost estimate if applicable)
The issue is not operational budgets, but the possible of the DEEP issuing a Notice of Violation and the costs associated with possible fines and attorney fees.	

5	GRANT FUNDING/OTHER FUNDING, if applicable (detailed explanation of grant/other funding, including the amount, source of funding, status, town match, if any. Attach award letter if available)
None	

6	ATTACH PLAN ESTIMATE, SERVICE AREA MAP AND/OR OTHER SUPPORTING DOCUMENTATION (if none, simply state that in the area below)
Memorandum dated November 12, 2020 Anchor Engineering	

COST/FUNDING SOURCE							
	FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026
1	Current Year Capital	1	250,000				
2	Utility Budget/Sewer Cap Maint Fund						
3	Transfer to CNR						
4	Short/Long-term Bonds						
5	LoCIP (detail in section 5 above)						
6	CNR Undesignated Fund Balance						
7	Federal/State Grants (detail in section 5)						
8	Other Funding (detail in section 5 above)						
	TOTALS	1	250,000	0	0	0	0



MEMORANDUM

DATE: November 12, 2020
PROJECT: 3261.045.001
TO: Gary Schneider, Director of Public Works, Town of Waterford
FROM: D. Scott Atkin
RE: Underground Storage Tanks
Waterford Public Safety Complex, 200 Boston Post Road

In addition to the "new" aboveground diesel and gasoline fuel tanks, there are three other underground storage tanks (USTs) currently located at the Waterford Public Safety Complex, identified in the Town's Assessor's records as the 200 Boston Post Road parcel. Barton & Loguidice (formerly Anchor Engineering Services, Inc.) has performed a site inspection, reviewed DEEP and Town UST filings, and reviewed Town records in attempt to evaluate existing tank sizes, compositions, connections, etc. and to develop action plans for each tank.

This memorandum will refer to the main operating areas / buildings onsite: the Police Station, the Dispatch Center / Fire Department, Youth Services, and the former Dog Pound.

Police Station (41 Avery Lane)

There is a 2,500-gallon diesel/heating oil UST located just outside the Police Station, northeast of the electric gate. This tank was installed in December 1991 and will meet the end of its 30-year service life in December 2021. It currently provides fuel for the building. Site plans, discussions with onsite Town personnel, and the current DEEP UST notification form provide consistent information. Service Station Equipment recently performed some maintenance upgrades to this tank to comply with DEEP's UST regulations. This tank, the associated fuel supply and return piping, the vent, and the electrical service should be removed within the next year. The tank should be replaced with either an aboveground or underground heating oil tank. Aboveground is recommended for environmental and longevity reasons, but an aboveground tank will utilize an approximate 12-ft by 18-ft area.

In addition, there is a 550-gallon waste oil UST located outside the southeast garage bay of the Police Station. This tank was installed in June 1991 and will meet the end of its 30-year service life in June 2021. According to onsite personnel, the tank has never been utilized. Unfortunately, piping details showing the maintenance bay fill port(s) for this waste oil could not be located in the Town files. This tank should be removed or abandoned in place (with approval of the Fire Marshal). Any associated fill port(s) should be identified and sealed or removed.

Dispatch Center / Fire Department (204 Boston Post Road)

There is a 6,000-gallon heating oil UST located just south of the southwest corner of this building. This tank was installed in April 1994 and will meet the end of its 30-year service life in April 2024. It currently provides fuel to the building and to a generator. During the site inspection, we noted a couple sets of pipes heading off from the tank: to the north towards the building and also to the west towards the Boston Post Road. We recommend an underground utility survey to confirm the locations / destinations of piping and conduits associated with this tank. The tank, associated piping, and conduits should be removed within the next three years. A determination will be needed on the type of heating system for the

The experience to
listen
The power to
solve™



building. If it will continue to be heated with oil, then a replacement aboveground or underground tank will be needed. If it will be converted to another heating type, then a new tank will not be required.

Youth Services Building (200 Boston Post Road)

Based upon the most recent DEEP UST notification form and discussions with onsite Town personnel, the 1,000-gallon heating oil UST for this building was removed in 2018. There are no tanks associated with this structure that require removal or replacement.

Note that the fuel tank monitoring system for the recently installed aboveground fueling station is still located in the basement of this building.

Former Dog Pound

There is an old 275-gallon metal aboveground heating oil tank located near the northwest corner of the former Dog Pound. The tank does not appear to be on a stable footing and could fall over causing a release to the environment. This tank should be emptied of any product, sludge, and/or rainwater, and cleaned. The tank, its contents, and the cleaning liquids should be properly disposed. As the tank is not in use, we recommend that this work be completed as soon as possible.

Action Plan and Preliminary Budget Estimates

The two tanks at the Police Station need to be removed in 2021. Although the first of the tanks, the unused waste oil tank, needs to be removed by June, we believe that the DEEP will allow it to be removed in the next fiscal year with:

- Confirmation that the tank is empty or opening the tank, emptying it of all contents including any sludge that may have accumulated, and cleaning it in-situ; and
- Advance notification.

We recommend removing both tanks and associated piping at the Police Station next summer or fall and replacing the 2,500-gallon tank with a double-walled steel or Convault-type aboveground tank. Both existing tanks are located under paved surfaces that will need to be restored after the tanks have been removed.

An item for consideration is if we should perform a limited subsurface investigation of the soils near each tank to determine if there has been any releases and if contaminated soils will need to be managed and disposed of during tank removal. This investigation is optional; it would provide useful information for future tank removal budgeting. However, if tank inventory reconciliations have been good and the monitoring system has not shown water in the tank, then it is probably not necessary. A limited subsurface investigation of the two tanks could be completed for \$7,500 - \$10,000.

The process for the tank removals / replacement would be:

- Finalize evaluation of existing conditions and temporary fuel supply needs during construction.
- Perform limited subsurface investigation, if desired.
- Confirm requirements for tank replacement: size, composition, location, foundation requirements, etc.
- Apply for local approvals necessary for tank replacement. It appears that this may be possible with site plan approval from Town staff.
- Prepare technical plans and specifications for tank removals and replacement.
- Finalize contract documents and prepare bid package.
- Bid the project, respond to RFIs, issue addenda as needed, evaluate bids, and award the contract.
- Order replacement tank. Note that there is currently a 6 to 8 week lead time on tanks.
- Notify DEEP of tank removal schedule and obtain local permits for tank removals and replacement.
- Install temporary fuel supply, as needed.



- Remove tanks and manage any contaminated soil.
- Install replacement tank and piping; remove temporary tank.
- Site restoration, grading, and re-paving.
- Tank closure report and DEEP notification.

A similar process will be needed for the larger tank at the Dispatch Center / Fire Department Building. The primary issue is if we want to manage this tank at the same time as the Police Station tanks. We recommend an underground utility survey prior to design in order to confirm piping and conduit locations prior to tank removal. Additionally, the existing tank is not located in a paved area. Grading and seeding will be appropriate surface treatments unless a new tank is installed on a concrete pad at the same location.

The preliminary cost estimates for the tank removals and replacement at the Police Station are:

Description	Estimated Costs		
Design and Bidding Phase	\$9,000	-	\$11,000
Ltd Subsurface Investigation (optional)	\$7,500	-	\$10,000
Tank Removals	\$45,000	-	\$65,000
Tank Replacement	\$120,000	-	\$150,000
SPCC Plan	\$2,500	-	\$3,000
Preliminary Budget Estimate	\$184,000	-	\$239,000

If the heating oil UST at the Dispatch Center / Fire Department were removed and replaced at the same time, the estimated costs would increase by \$150,000 to \$200,000.

If the Town waits and the heating oil UST at the Dispatch Center / Fire Department were removed and replaced in 2022 or 2023, the estimated costs would likely increase by another \$20,000 to \$30,000.

If you have any questions about this information, please do not hesitate to contact me at (860) 633-8770.

**TOWN OF WATERFORD
CAPITAL PROJECT REQUEST FORM**

DEPARTMENT/AGENCY <u>Facilities</u>	CONTACT PERSON <u>Gary Schneider</u>
PROJECT NAME <u>AC Unit Replacement for Emergency Radio System Sites</u>	DEPARTMENT PRIORITY <u>2</u>

1	DESCRIPTION AND JUSTIFICATION (describe the type, purpose & anticipated accomplishments of the project)																																																																						
	The air conditioning units were recently evaluated serving emergency radio systems at the Town's cell tower sites. Waterford has a total of five tower sites with radio equipment and a total of nine air conditioning units. Four sites have two AC units and the remaining site has one unit. Four of the units have been replaced in recent years due to failed equipment. Five units remain to be replaced. It is recommended that the remaining five units be replaced to avoid emergency work or failure of the equipment at the site. The Town received a quote dated Oct 16, 2020 from one vendor for \$8,877 per replacement unit. A 2.5% anticipated increase in cost is anticipated due to the length of time between the receipt of the quote and potential availability of funds. This brings the unit costs to \$45,500. Controls for the HVAC units are recommended, which are anticipated to cost \$15,000. The total project cost is anticipated to be \$60,500.																																																																						
2	PROJECT STATUS IF IN PROGRESS																																																																						
	<u>None</u>																																																																						
3	LIST OTHER PROJECTS WITHIN YOUR DEPARTMENT OR ANOTHER DEPARTMENT THAT WILL BE IMPACTED BY THIS REQUEST																																																																						
	<u>None</u>																																																																						
4	DESCRIBE THE IMPACT ON DEPARTMENT OPERATING BUDGET (include cost estimate if applicable)																																																																						
	<u>None</u>																																																																						
5	GRANT FUNDING/OTHER FUNDING, if applicable (detailed explanation of grant/other funding, including the amount, source of funding, status, town match, if any. Attach award letter if available)																																																																						
	<u>None</u>																																																																						
6	ATTACH PLAN ESTIMATE, SERVICE AREA MAP AND/OR OTHER SUPPORTING DOCUMENTATION (if none, simply state that in the area below)																																																																						
	<u>Quote from one vendor for AC unit only. Communication component is rough opinion of cost.</u>																																																																						
7	COST/FUNDING SOURCE																																																																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">FUNDING SOURCE</th> <th style="width: 15%;">APPROVED FUNDING TO DATE</th> <th style="width: 10%;">FY2022</th> <th style="width: 10%;">FY2023</th> <th style="width: 10%;">FY2024</th> <th style="width: 10%;">FY2025</th> <th style="width: 10%;">FY2026</th> </tr> </thead> <tbody> <tr> <td>1 Current Year Capital</td> <td></td> <td style="text-align: center;">60,500</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 Utility Budget/Sewer Cap Maint Fund</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 Transfer to CNR</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 Short/Long-term Bonds</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 LoCIP (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 CNR Undesignated Fund Balance</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7 Federal/State Grants (detail in section 5)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8 Other Funding (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTALS</td> <td style="text-align: center;">0</td> <td style="text-align: center;">60,500</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026	1 Current Year Capital		60,500					2 Utility Budget/Sewer Cap Maint Fund							3 Transfer to CNR							4 Short/Long-term Bonds							5 LoCIP (detail in section 5 above)							6 CNR Undesignated Fund Balance							7 Federal/State Grants (detail in section 5)							8 Other Funding (detail in section 5 above)							TOTALS	0	60,500	0	0	0	0
FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026																																																																	
1 Current Year Capital		60,500																																																																					
2 Utility Budget/Sewer Cap Maint Fund																																																																							
3 Transfer to CNR																																																																							
4 Short/Long-term Bonds																																																																							
5 LoCIP (detail in section 5 above)																																																																							
6 CNR Undesignated Fund Balance																																																																							
7 Federal/State Grants (detail in section 5)																																																																							
8 Other Funding (detail in section 5 above)																																																																							
TOTALS	0	60,500	0	0	0	0																																																																	



New England Mechanical Services, Inc.
3 Shaw's Cove, Suite 102
New London, CT 06320

Phone: 860.442.1855
Fax: 860.442.2139
www.nemsi.com

October 16, 2020

Mr. David Garside
Town of Waterford
204 Boston Post Road
Waterford, CT 06385

Reference: Proposal Number: Q131248109180
Subject: Replace one 5- ton Bard A/C unit
Location Address: Data Center Fargo Road, Waterford

Dear David:

Thank you for giving EMCOR Services New England Mechanical (NEMSI) the opportunity to provide a quotation for the above referenced project.

The scope of our work will include labor and materials for the following:

- Remove existing unit
- Mount new unit on side wall of building and modify, if needed
- Perform unit start up
- Properly dispose of old unit

Exclusions:

- Hazardous work and material (asbestos)
- Overtime

NEMSI's price to perform the work outlined above is \$ 8,87700. Our price is valid for thirty (30) days from the date of this quote. However, due to the volatility of the commodities market, such as copper, steel, wiring, etc., some material items will be subject to re-pricing on the day of acceptance.

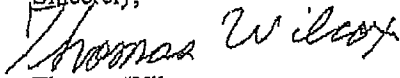
This work will be invoiced and is payable within 30 days after invoicing. Please see the last page for our Terms and Conditions.

To begin this work, please sign the acceptance line below and either fax or mail this letter back to us.

October 16, 2020
Mr. David Garside
Town of Waterford
Page 2 of 3

David, we would like to thank you for the opportunity to work with you on this project. Please feel free to call with any questions.

Sincerely,



Thomas Wilcox
Project Manager
twilcox@nemsu.com
860-235-9482 Cell
860-865-6126 Office

TW: ps

ACCEPTANCE/AUTHORIZATION TO PROCEED

- Authorized Signature: _____
- Printed Name: _____
- Title: _____
- Date: _____
- Purchase Order #: _____

**TOWN OF WATERFORD
CAPITAL PROJECT REQUEST FORM**

DEPARTMENT/AGENCY Facilities	CONTACT PERSON Gary Schneider
PROJECT NAME Southwest School Demolition Fund	DEPARTMENT PRIORITY 3

1	DESCRIPTION AND JUSTIFICATION (describe the type, purpose & anticipated accomplishments of the project)																																																																						
	Project LEARN vacated the Southwest School in July of 2020. The building is currently vacant and only the minimal necessary utilities are being maintained to support storage of excess furniture from the schools during the COVID-19 pandemic. The Town does not have a long-term use for the school building. Any future use of the property will require demolition of the current structure. Funds requested herein would be used to hire professionals to assess the building and any hazardous materials and develop demolition plans and a cost estimate to support future bidding and funding. 75,000 is requested to support this work in FY22.																																																																						
2	PROJECT STATUS IF IN PROGRESS																																																																						
3	LIST OTHER PROJECTS WITHIN YOUR DEPARTMENT OR ANOTHER DEPARTMENT THAT WILL BE IMPACTED BY THIS REQUEST																																																																						
4	DESCRIBE THE IMPACT ON DEPARTMENT OPERATING BUDGET (include cost estimate if applicable)																																																																						
5	GRANT FUNDING/OTHER FUNDING, if applicable (detailed explanation of grant/other funding, including the amount, source of funding, status, town match, if any. Attach award letter if available)																																																																						
6	ATTACH PLAN ESTIMATE, SERVICE AREA MAP AND/OR OTHER SUPPORTING DOCUMENTATION (if none, simply state that in the area below)																																																																						
7	COST/FUNDING SOURCE																																																																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">FUNDING SOURCE</th> <th style="width: 10%;">APPROVED FUNDING TO DATE</th> <th style="width: 10%;">FY2022</th> <th style="width: 10%;">FY2023</th> <th style="width: 10%;">FY2024</th> <th style="width: 10%;">FY2025</th> <th style="width: 10%;">FY2026</th> </tr> </thead> <tbody> <tr> <td>1 Current Year Capital</td> <td></td> <td>106,000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 Utility Budget/Sewer Cap Maint Fund</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 Transfer to CNR</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 Short/Long-term Bonds</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 LoCIP (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 CNR Undesignated Fund Balance</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7 Federal/State Grants (detail in section 5)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8 Other Funding (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTALS</td> <td></td> <td>0</td> <td>106,000</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026	1 Current Year Capital		106,000					2 Utility Budget/Sewer Cap Maint Fund							3 Transfer to CNR							4 Short/Long-term Bonds							5 LoCIP (detail in section 5 above)							6 CNR Undesignated Fund Balance							7 Federal/State Grants (detail in section 5)							8 Other Funding (detail in section 5 above)							TOTALS		0	106,000	0	0	0
FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026																																																																	
1 Current Year Capital		106,000																																																																					
2 Utility Budget/Sewer Cap Maint Fund																																																																							
3 Transfer to CNR																																																																							
4 Short/Long-term Bonds																																																																							
5 LoCIP (detail in section 5 above)																																																																							
6 CNR Undesignated Fund Balance																																																																							
7 Federal/State Grants (detail in section 5)																																																																							
8 Other Funding (detail in section 5 above)																																																																							
TOTALS		0	106,000	0	0	0																																																																	



MEMORANDUM

DATE: November 11, 2020
PROJECT: 3261.035.001
TO: Abby Piersall, Planning Director, Town of Waterford
FROM: D. Scott Atkin
RE: Preliminary Cost Estimates
Southwest Elementary School, 51 Daniels Avenue

The Town is considering the demolition of the Southwest Elementary School and subsequent redevelopment of the property. Redevelopment plans have not been finalized, so the information in this memorandum is limited to building demolition and site grading. The purpose of this memorandum is to provide you with planning considerations and preliminary budget estimates.

The existing structure covers approximately 30,000 square feet and there are two underground fuel oil tanks onsite. A hazardous building material (HBM) pre-demolition survey and additional evaluation of the tanks are recommended to further evaluate site conditions.

The HBM survey should include for asbestos, lead-based paint, PCBs (paint, caulk, fluorescent light ballasts, and any transformers or electrical equipment), and mercury (thermostats, fluorescent lights/ballasts, etc.). The testing should be performed in accordance with all applicable local, state, and national regulations, including Connecticut Department of Public Health guidance for pre-demolition surveys. A detailed survey will identify hazardous building materials that need to be addressed prior to and/or during demolition and will be used to develop design specification and cost estimates for their proper management and disposal. A HBM survey for a school this size could be completed for approximately \$15,000 to \$20,000. This estimate can be refined, and possibly decreased, after a site walk through and review of any recent AHERA asbestos survey reports.

Based on DEEP's database of registered underground storage tanks and a recent site walk, there are two STI-P3 steel fuel oil tanks located at the school. One tank has a 10,000-gallon capacity and the other tank has a 2,000-gallon capacity. Both tanks were installed in 1988 and are past their 30-year service lives. There are two levels of tank evaluation that the Town may want to consider:

- The first should be done as soon as possible. It includes opening each tank and determining the quantity of product in each. If there is no need to continue using the tanks for heating the building, we recommend pumping any remaining heating oil out of them as soon as possible. This evaluation could be performed by Town staff or for minimal cost by Barton & Loguidice.
- The second is to perform a limited subsurface investigation of the soils near each tank to determine if there has been any releases and if contaminated soils will need to be managed and disposed of during tank removal. This investigation is optional; it would provide useful information for future tank removal budgeting. A limited subsurface investigation for the two tanks could be completed for \$6,000 to \$9,000.

The experience to
listen
The power to
solve 



Preliminary Cost Estimate Memo
Southwest School Project
November 12, 2020
Page 2

Upon completion of the HBM survey and underground storage tank evaluation, we would develop a list of required work, key design considerations, and permitting requirements. The next step would be to prepare a set of contract bid documents for HBM abatement, building demolition, tank removal, and site regrading / restoration (assuming that a more detailed final redevelopment option had not yet been selected). These bid documents will include technical specifications, site plans, and details and standard contract language and insurance and bond requirements for the project. Design services for preparation of the contract documents and assistance during bidding could be completed for approximately \$16,000 to \$22,000.

This budget estimate assumes that site mapping suitable for this project exists and is available for use. If a limited site survey were needed for this project, it could be completed for approximately \$6,000.

If you have any questions about these budget estimates, please do not hesitate to contact me at (860) 633-8770.

**TOWN OF WATERFORD
CAPITAL PROJECT REQUEST FORM**

DEPARTMENT/AGENCY

Facilities

CONTACT PERSON

Gary Schneider

PROJECT NAME

Eugene O'Neill Mansion Roof Replacement

DEPARTMENT PRIORITY

4

1 DESCRIPTION AND JUSTIFICATION (describe the type, purpose & anticipated accomplishments of the project)

The Eugene O'Neill Theater Mansion's roof is in significant disrepair and requires replacement. The Mansion serves as the main offices for the organization, and is a key historic building at the campus.

Replacement of the roof must take into account that the building, although not on the historic record, it is a historical building that has a national prominence. Careful thought on materials, details and colors carry as much weight as the materials used for the new roof. For instance the house has wooden gutters that have failed. Do they get replace with wooden gutter or something else? Fascia boards have rotted which may have affected the rafters. The roof replacement must be approached as a system, not just the individual components. Funds requested are for limited spot repairs to make the building watertight and to hire an architect to prepare the plans and cost estimates for a roof, chimney (6) repairs, fascia, and gutters project for the following year.

2 PROJECT STATUS IF IN PROGRESS

None

3 LIST OTHER PROJECTS WITHIN YOUR DEPARTMENT OR ANOTHER DEPARTMENT THAT WILL BE IMPACTED BY THIS REQUEST

None

4 DESCRIBE THE IMPACT ON DEPARTMENT OPERATING BUDGET (include cost estimate if applicable)

Repair costs will exponentially increase as the components of the roof system fail

5 GRANT FUNDING/OTHER FUNDING, if applicable (detailed explanation of grant/other funding, including the amount, source of funding, status, town match, if any. Attach award letter if available)

None known

6 ATTACH PLAN ESTIMATE, SERVICE AREA MAP AND/OR OTHER SUPPORTING DOCUMENTATION (if none, simply state that in the area below)

Survey prepared dated September 14, 2020.

7 COST/FUNDING SOURCE

	FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026
1	Current Year Capital		35,000				
2	Utility Budget/Sewer Cap Maint Fund						
3	Transfer to CNR						
4	Short/Long-term Bonds						
5	LoCIP (detail in section 5 above)						
6	CNR Undesignated Fund Balance						
7	Federal/State Grants (detail in section 5)						
8	Other Funding (detail in section 5 above)						
	TOTALS	0	35,000	0	0	0	0

The O'Neil Theatre Complex -Mansion House Building Evaluation Survey

305 Great Neck Road, Waterford, CT 06385



Prepared by: Wayne A. Taylor dba NLR

18 Richard's Grove Road

Quaker Hill, CT 06375

(860)857-1654 E-mail wayneataylor@sbcglobal.net

Wayne A. Taylor dba NLR
18 Richard's Grove Road
Quaker Hill, CT 06375
(860) 857-1654 - wayneataylor@sbcglobal.net

September 14, 2020

Mr. David Garside, Facility Manager
Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

RE: The O'Neil Theatre Complex: Mansion House - Survey & Evaluation

Dear Sir:

At the request of your office we jointly conducted an initial survey of the above referenced property on August 17, 2020.

After this initial walk through, your office requested that we prepare and submit a brief report outlining only those issues that may be of significant concern to the owner.

As such and in order to complete these requests, please know that this office did return to this site on three additional occasions on August 29, 31 and September 9, 2020. This office did have the opportunity to meet with The O'Neil's facility personal and staff. Additionally this staff personal gave us three separate tours. During these tours these staff members pointed out several areas of their concern. These concerns have also been included within this report

General and Overall Findings: Mansion House

The most significant and specific of these concerns begin with the roofing system and its failure in and at many critical locations. **There are several areas of active water infiltration into this building that has been occurring (on and off) for what appears to be a number of years. (Please see the enclosed Power Point Presentation)**

Contained with the photographs enclosed there are several examples of this water infiltration abounding all – heretofore manmade temporary remedies/ obstacles. Please note the plastic sheathing, used rags, metal pan to catch and or divert this rainwater entry. Please refer to page fifteen (15).

The causes of this infiltration are many and are both highlighted and listed within the following pages.

Wayne A. Taylor dba NLR
18 Richard's Grove Road
Quaker Hill, CT 06375
(860) 857-1654 - wayneataylor@sbcglobal.net

- The unattended long term damage caused by wind and or storm to this structure. This resulting in both missing and damaged shingles. This condition is allowing the infiltration of the elements (rainwater) to enter directly into this structure. Please refer to page eight (8)
- Two of the three of the existing large (main house) chimneys are in critical condition. As a result of their condition rainwater is allowed flow directly into this building - both through the failing masonry joints and their flashing. We have been informed that one chimney had previously partially collapsed. It is our concerted belief that if immediate care is not provided -the others are likely to do so within the very near future. There are two other chimneys that have also had a history of problems as well. Please refer to pages 2, 3,4,5,6 and 7.
- The copper roof on top of the Northern elevation dormer has become so corroded and pitted that the elements (rainwater and their like) are allowed to flow directly into this building. Please refer to page sixteen (16).
- The Wooden Gutters System at all elevations is in partial failure. While some areas overflow - allowing rainwater to enter through the window below - other areas have decomposed. Please refer to pages 6, 8, 9,10,11,13, and 8.
- The Single Story Wing (CEO's Office) - Eastern Elevation - Shingle Asphalt roofing System. This system has been repaired on several occasions over the years. This work has included the Please refer to page three (3).
- Single Story Addition - West & Northwestern Elevation. This flat roof is problematic with ongoing occasional leaking. There is a section of this roof that - if stepped on - one would fall through into the room below. This roof has been repaired several times of the years including dormer flashing repair, chimney base flashing repair along with its field membrane. Please refer to pages 12 and 13.
- The Attic Wardrobe Room - Electrical Conundrum. There are two separate areas located under the floorboards that are both close to where water is wicking in around a chimney. We have been informed that these wires have are heretofore untraceable. We are also informed that the wiring is a mix of knob and tube, AFC cable and Romex. Please refer to page nineteen (19).
- The Original Windows- This office has been informed that more than one is actively leaking. The most active of these are shown on pages2, 14, 16, 17 and 18.

Wayne A. Taylor dba NLR
18 Richard's Grove Road
Quaker Hill, CT 06375
(860) 857-1654 - wayneataylor@sbcglobal.net

- Faulty Safety Handrails- Interior Third Floor Access- It is readily apparent that the handrail on the third floor is not secured and is unsafe. Please refer to page 19.
- The third story Eastern Elevation wall- is in almost total failure as a result of prolonged water infiltration from a decomposing wooded gutter system. Please refer to page ten (10).
- The Northern- Northeastern Elevation Porch- Here there is/are few items of concern. The capital of a Doric column shown on page eleven (11) is showing signs of extensive water damage. A leaking gutter drain line is compromising the capital of this Doric porch column – along with the surrounding trim work.

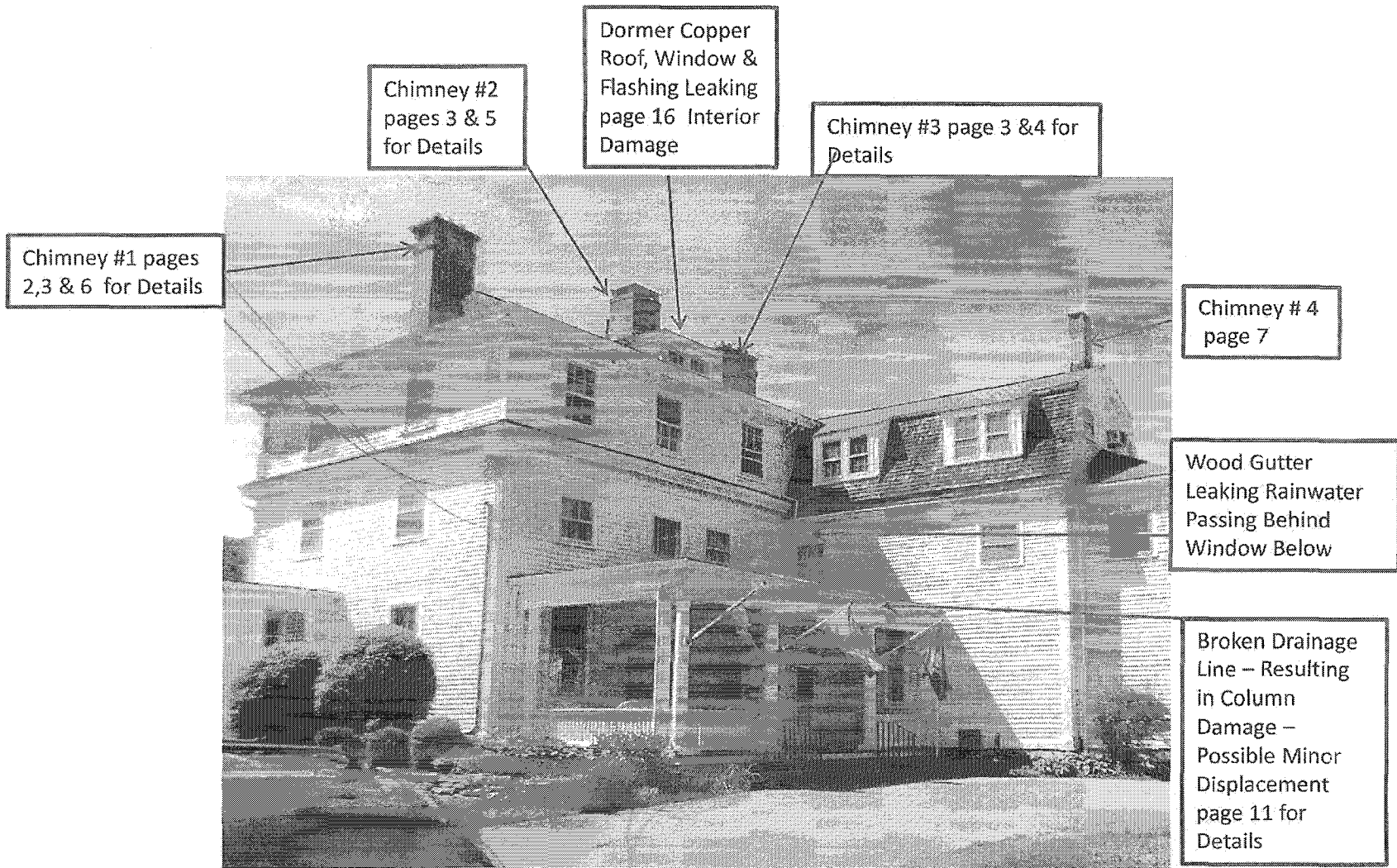
There are also signs of minor settlement separation both in railing and flooring system. Please refer to page twenty (20).

END OF REVIEW

Should you have any questions or require additional information with regards to either the above or enclosed, please do not hesitate to contact me directly.

Best of All Regards

Wayne A. Taylor



Northern & Northeastern Elevation

The O'Neil Theatre Complex -Mansion House Building Evaluation Survey



Chimney # 1
Rainwater
Infiltrating
Through Flashing,
Mortar Joints &
Corbel page 6 for
Details

The Entire Third
Floor Clapboard
Siding Has
Loosened from
Water Infiltration
pages 9 & 10 for
Details

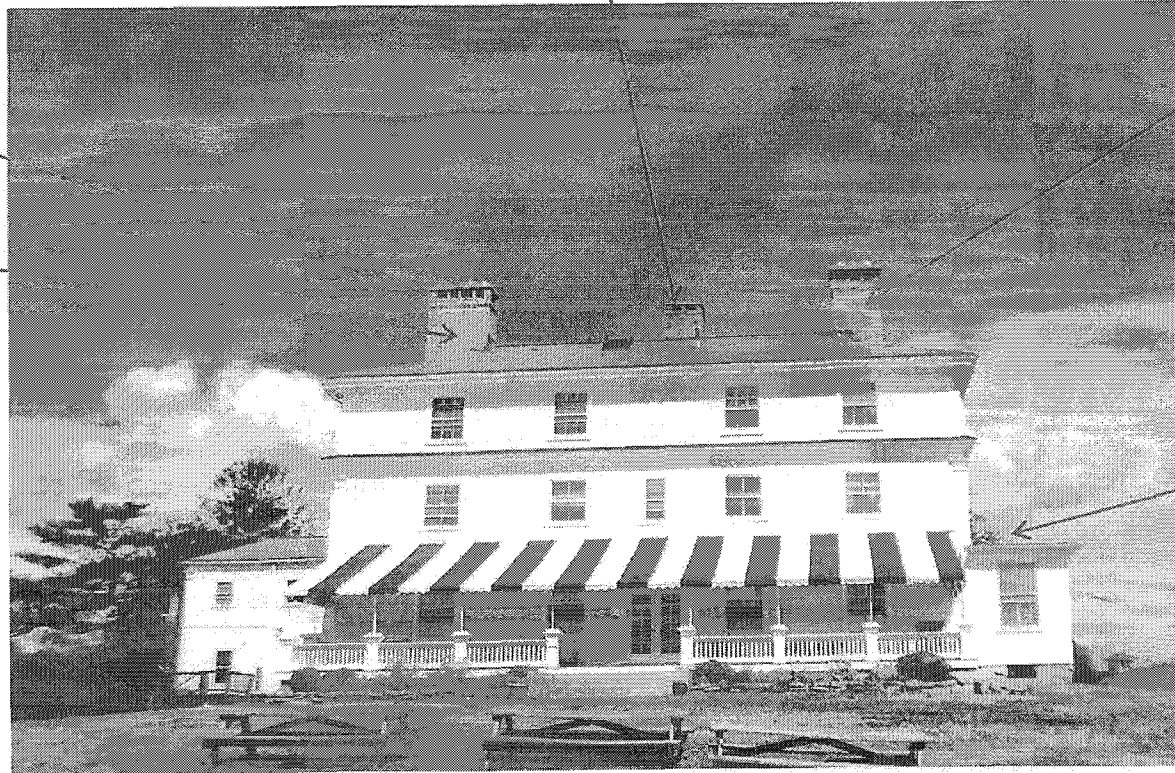
Attic Window Open
to the Elements
Leaking page to see
Example

Porch Roof- No
Attention Required

Chimney #5 page

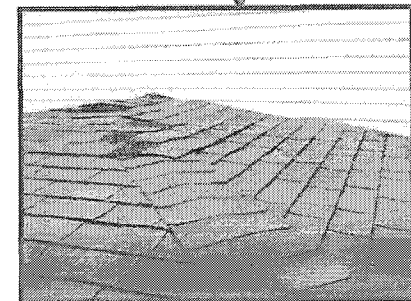
Chimney #2 Water Infiltration Spalling Corbel,
Mortar Joints & Flashing page 5

Chimney #3 Water
Infiltration Spalling
Corbel, Mortar
Joints & Flashing
page 4



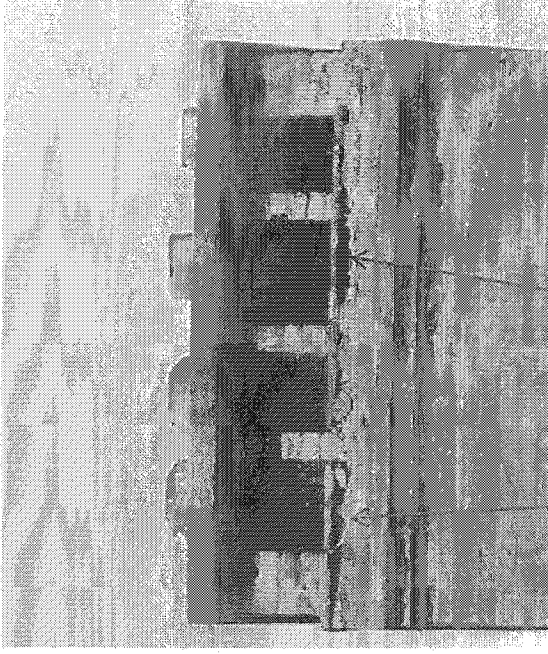
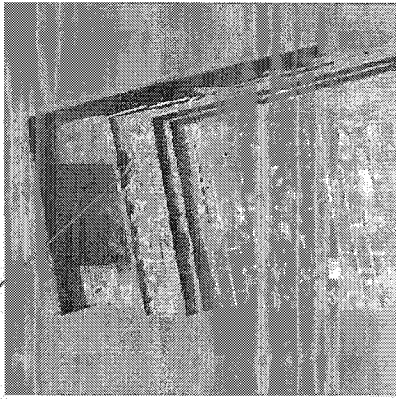
Chimney #1
Spalling, Water
Infiltration
page 6

CEO's Office
Almost Flat Roof
With Damaged
Shingles – As
Such it Leaks in
Heavy Rains

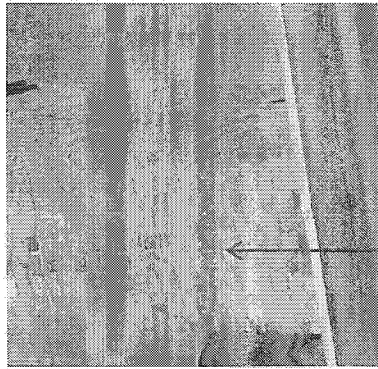


The O'Neil Theater Complex Mansion House Building Evaluation Survey
Southern Elevation

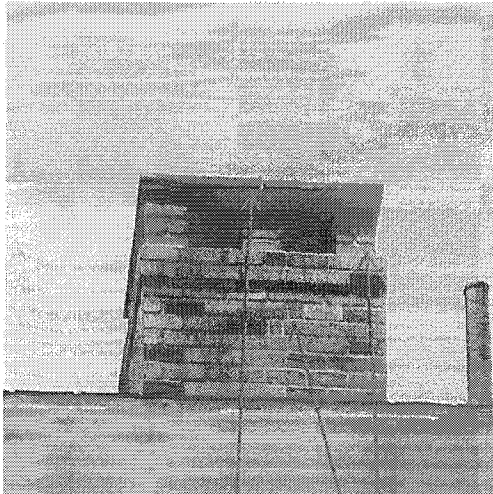
Chimney #3 Western Elevation Missing Brick & Spalling



Chimney #3 Southern Elevation – Missing Brick & Spalling

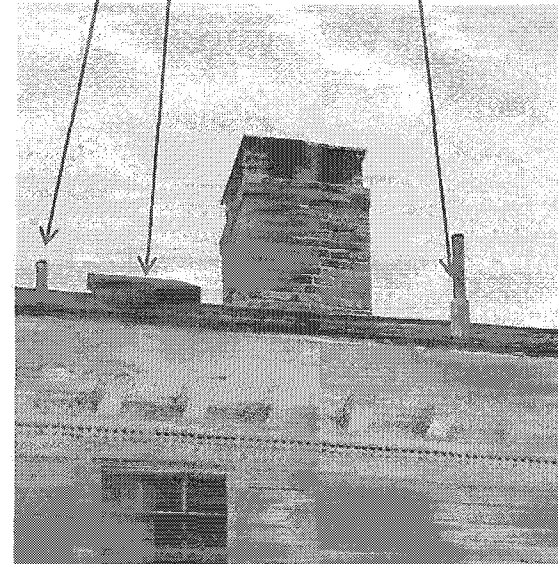


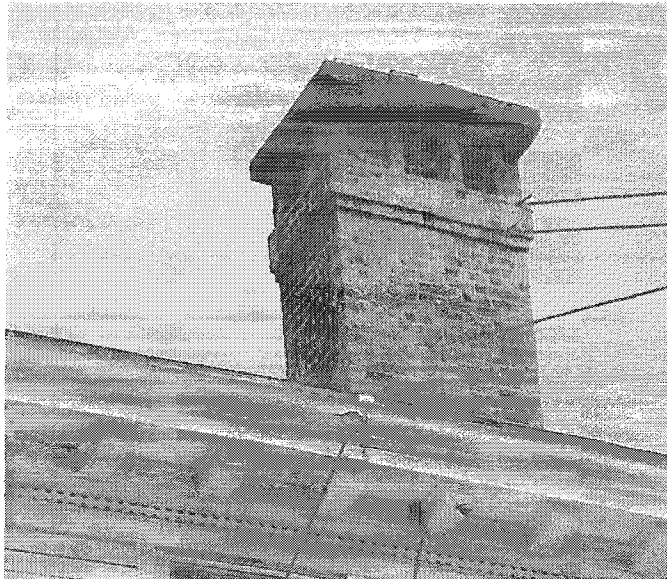
Chimney #3 Western Elevation Both Efflorescence and What Appears to be a Sealer Applied (over time)



Chimney # 2 Southern Elevation
Some Repairs Have Been completed over the years. However, Efflorescence is evident With traces Water Stains (Internally) Directly Under its Flashing. Cap is Open to the Elements pages -14 & 15

Southern Elevation Roof Access Hatch, & Vent Stacks
Water Stains (Internally) Directly Under Their Respective Location(s) See Attic Section pages -14 & 15



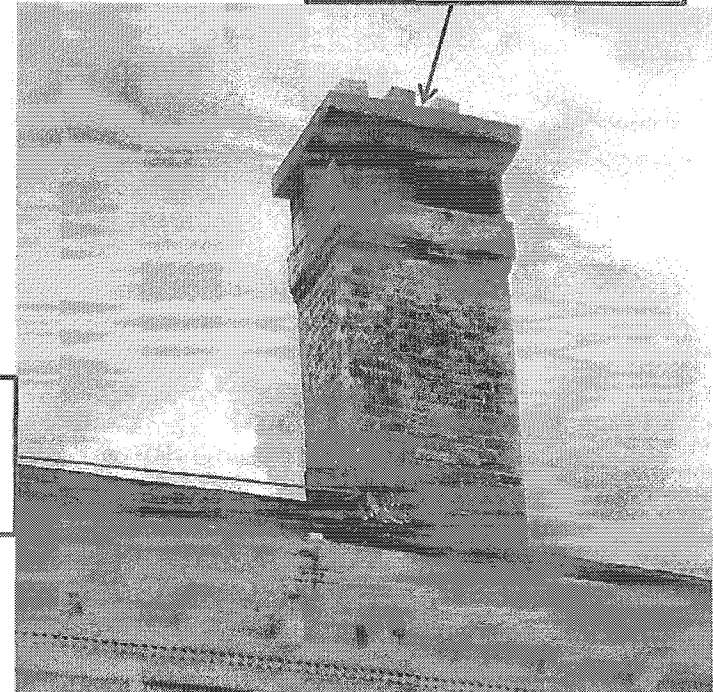


Chimney #1 **Southern Elevation** – Evidence of Spalling is Apparent With Signs of Both Efflorescence & Attempt to a Sealer page

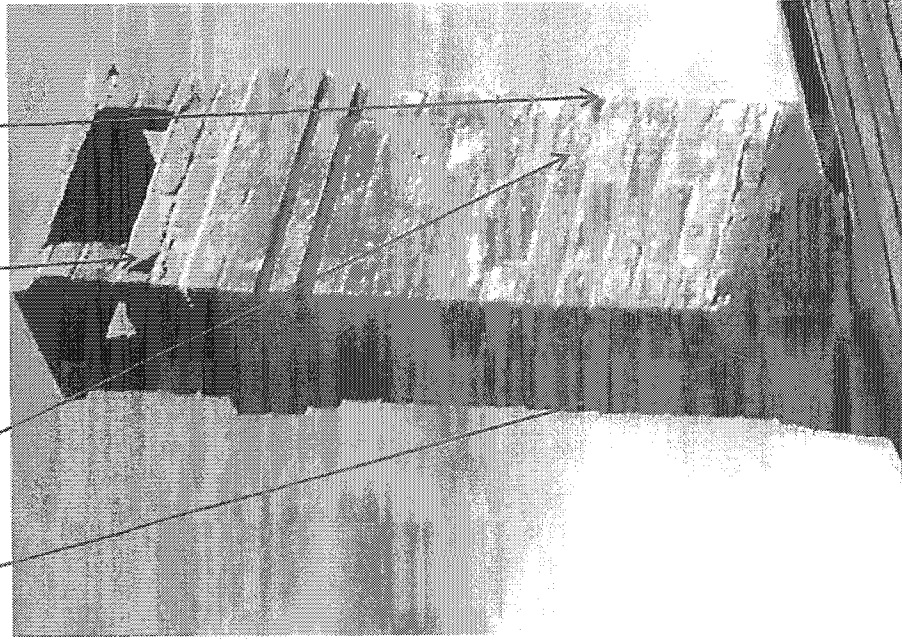
Wooden Gutter **Southern Elevation**
Broken Seam Water entering Soffit
Resulting in Damage

Chimney #1 **Southern Elevation** Failed Flashing
Water Infiltration Evident
Internally page

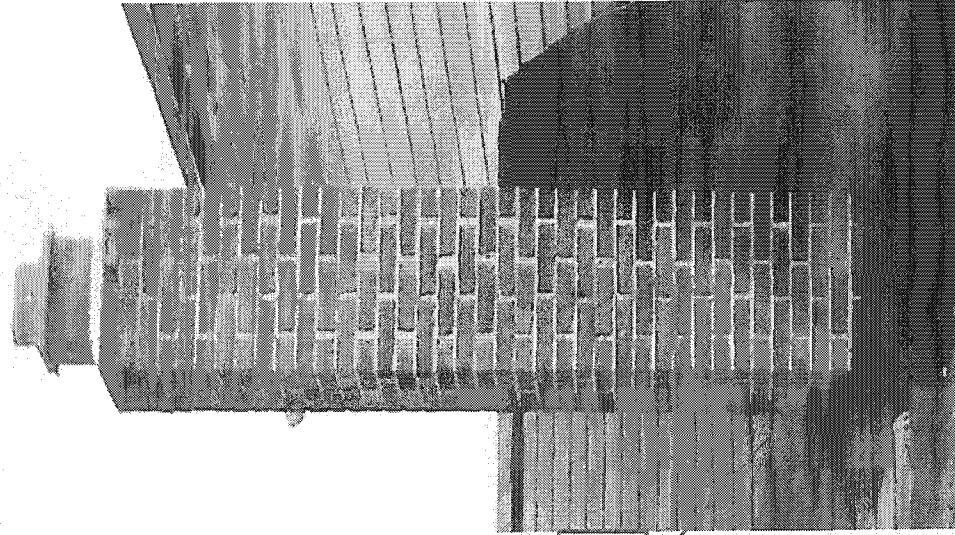
This Cap Was Replaced After
it Had Collapsed Onto The
Adjoining (CEO's) Roof
Below



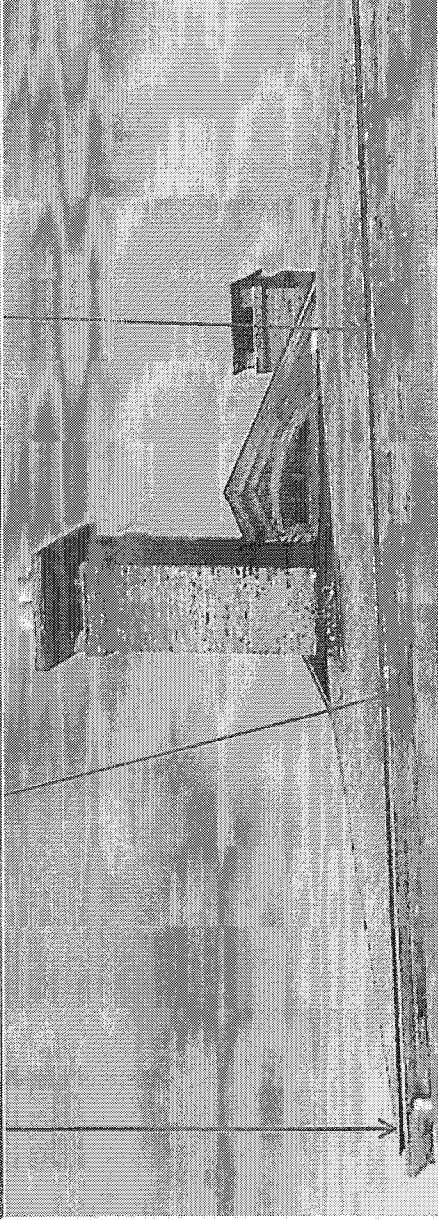
Right - Chimney #4 Western – South
Western Elevation Broken Bricks /
Spalling – Failed Mortar Joints –
Flashing Failure – Efflorescence &
Sealer Application Apparent.



Left – Chimney #5 Western
Elevation Flashing Failure



The Wooden Gutter- Third Story - Eastern Elevation -- All but in Complete Failure -- See page 9



The Asphalt Roofing System -- Southern Elevation -- Storm Damage Resulting in Direct Water Infiltration -- page

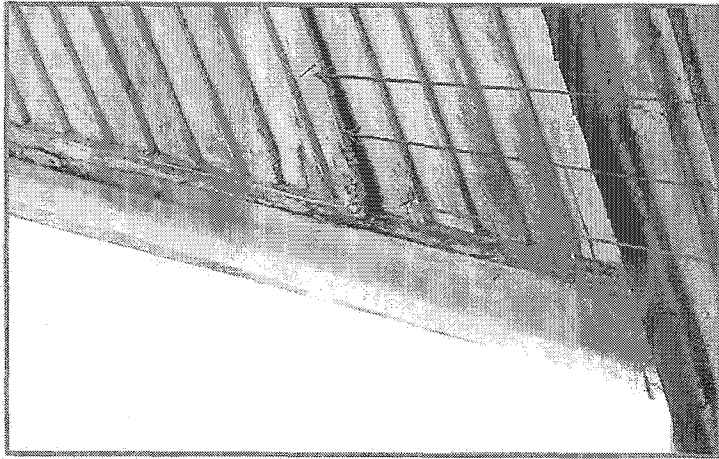


The O'Neil Theater Complex - Mansion House Building Evaluation Survey

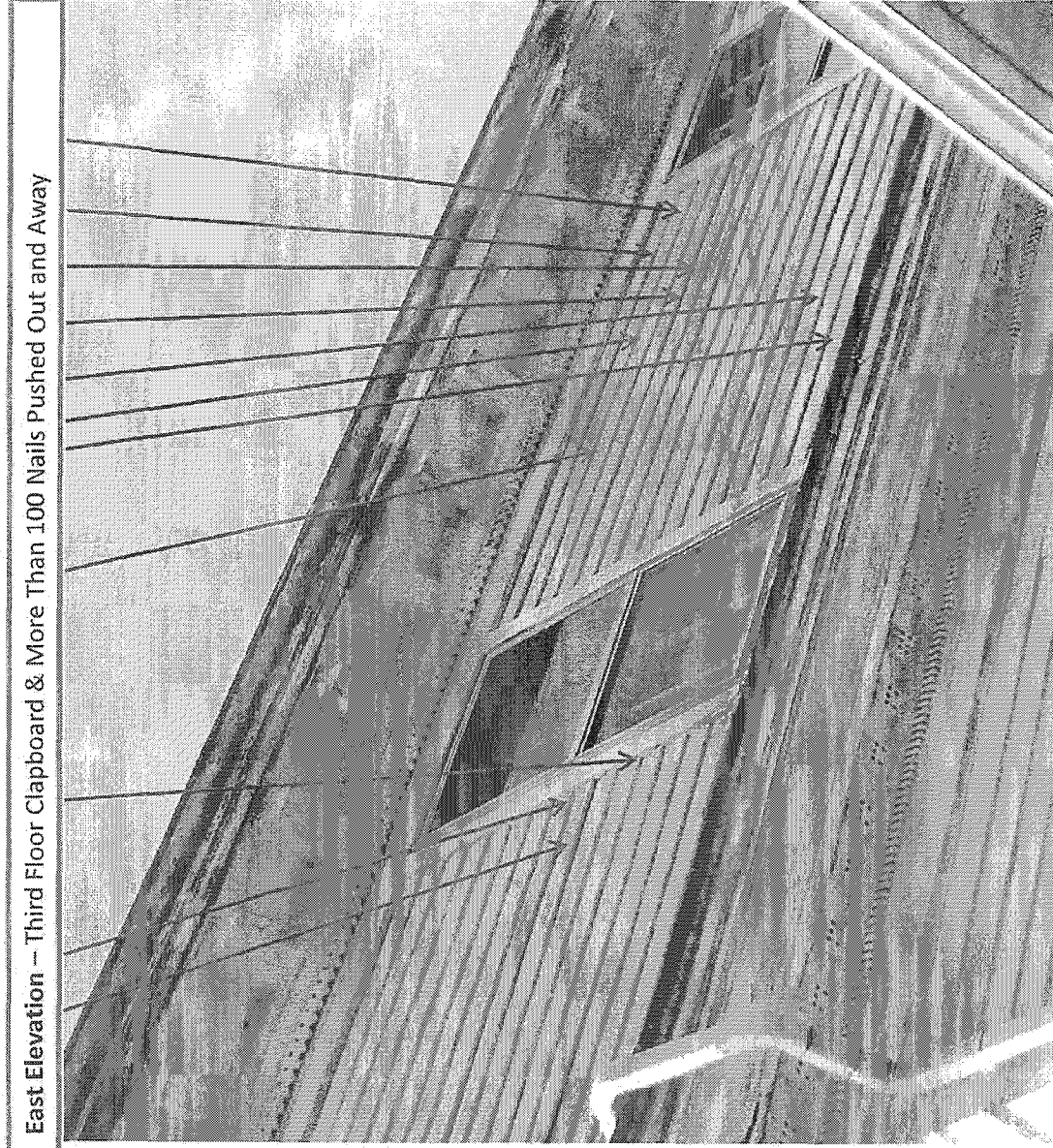
The Wooden Gutter – Third Story – **Eastern Elevation** – A Look From Underneath . Almost Complete Failure of The Gutter, Trim and Soffit Below. This Water Flow is Finding Its Way Behind The Clapboard & When it Freezes – Pushes The Siding Out & Away



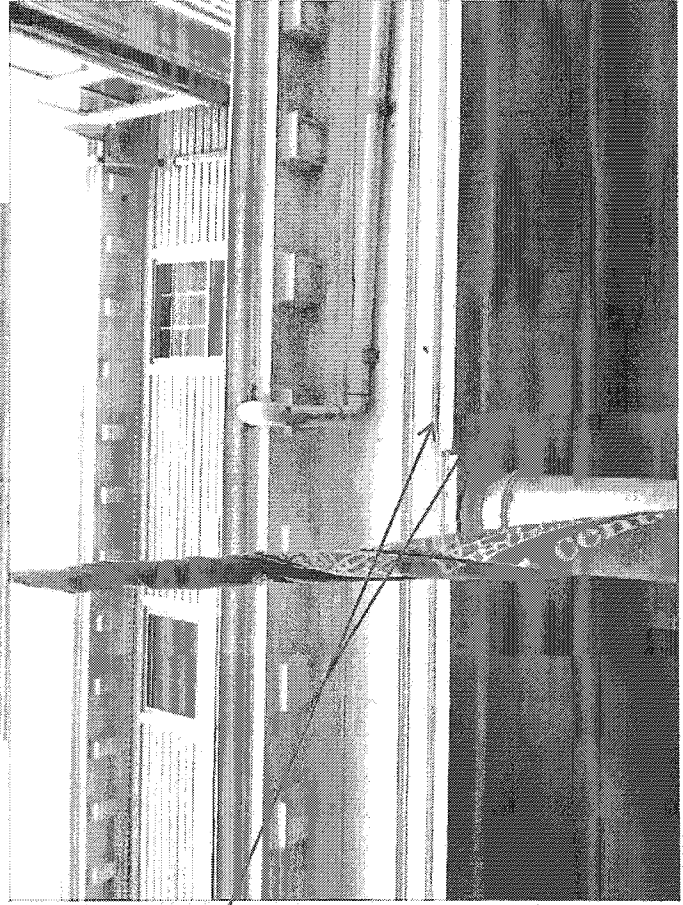
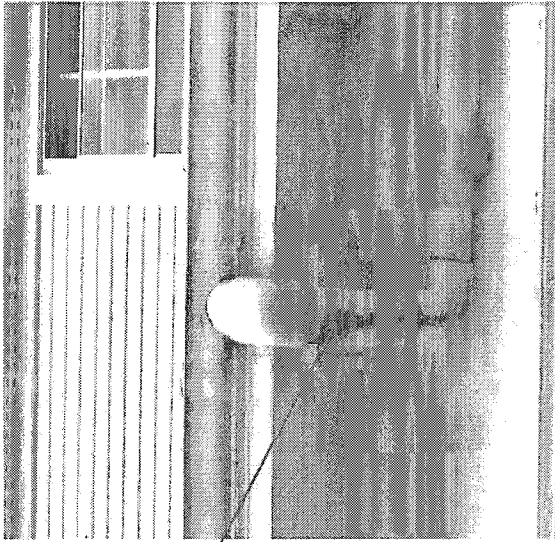
Water
Entering
Directly
Behind
Clapboard
Siding –
Moving
Siding
Away From
The
Building -



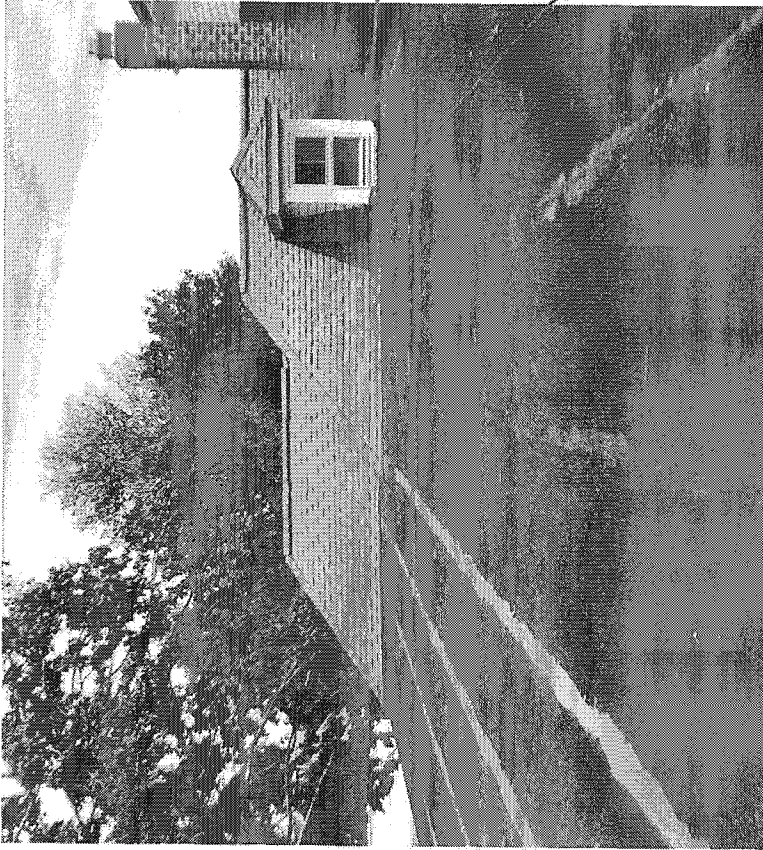
**Eastern – Southeast Corner Above
The CEO's Office Where this Lower
Roof Intersects the Clapboard –
Loose Siding and Nails Visible**



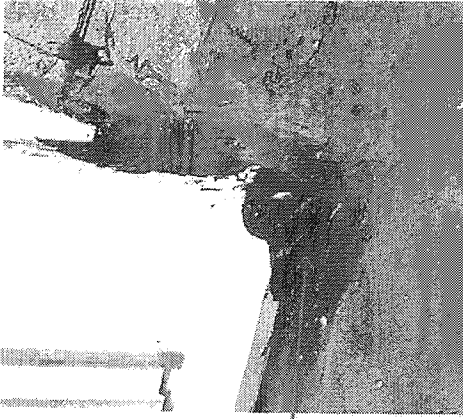
East Elevation – Third Floor Clapboard & More Than 100 Nails Pushed Out and Away



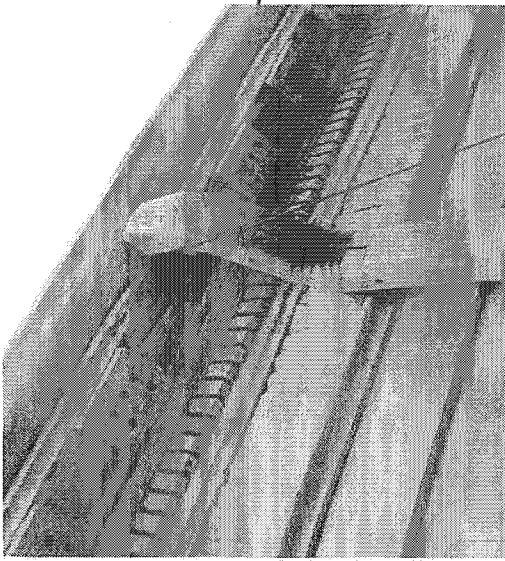
A Leaking Gutter Drain Line is Compromising The Capital of This Doric Porch Column – Along With the Surrounding Trim Work



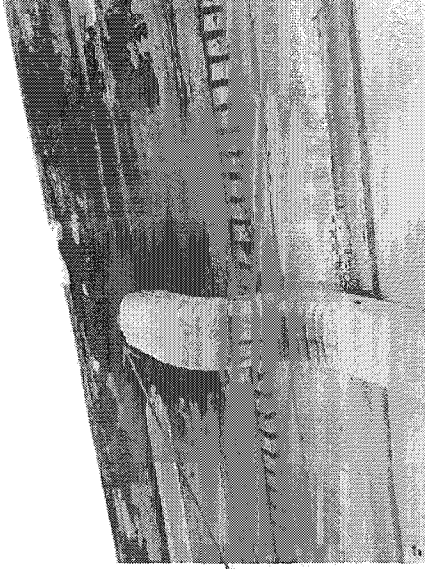
Western Elevation Flat Roof Problematic Leaking – The Flashing Around Both The Dormer Window & Chimney #5 (page 7) Have Had Temporary Repairs Made to Them



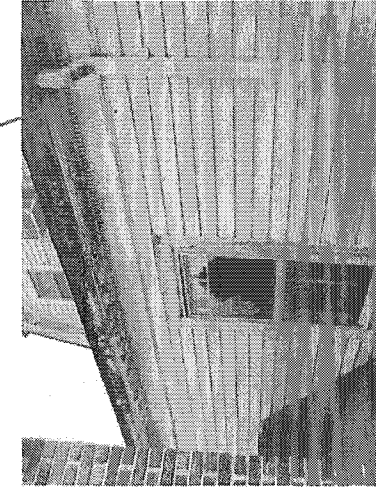
Standing on Top of The Flat Roof is an Addition (by The Hammond Family) – Looking South – Southeastern Elevation – One May See The General and Extensive Decomposing of the Wooden Gutter /Drainage System Along With The Over Due Painting and Repair



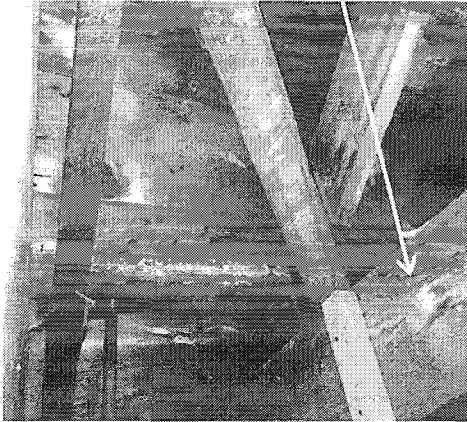
There Are Two Downspouts Above This Roof – This is Their Condition



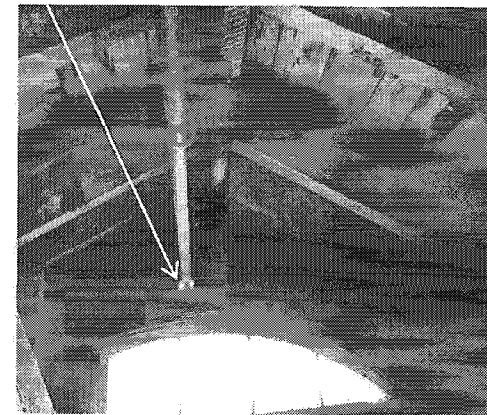
Flat Roof – Between Exhaust Fan and Adjacent Wall - There is No Plywood or Other Structural Support Substrate Here - Under This Area! Should One Step Here One Would Likely Step Through into the Room Below



Attic- Interior – Southern Elevation -
Water Stain on Truss & Supports

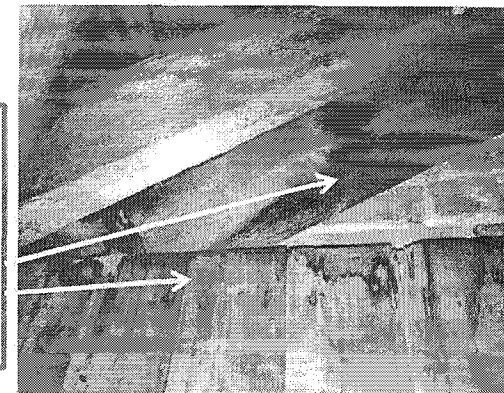


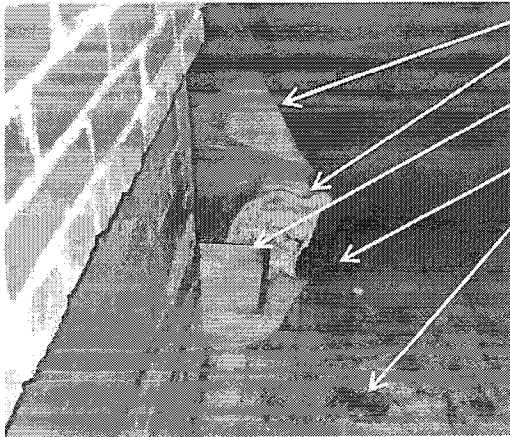
Attic – Interior – Western Elevation –
Open to The Elements



Attic – Interior –
Chimney #3 –
Western
Elevation-
Flashing Failure
& Masonry
Wicking

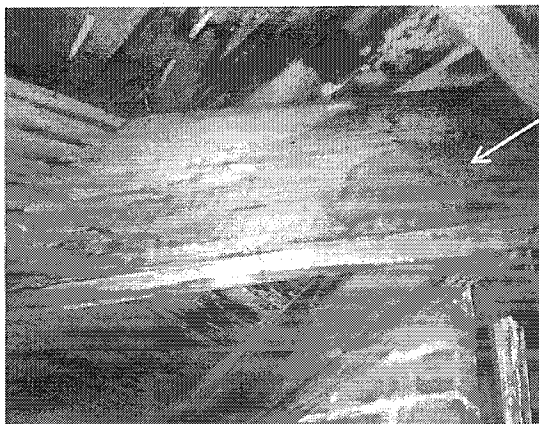
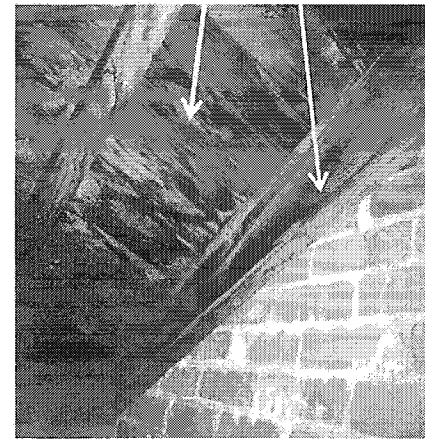
Attic – Interior –
Chimney #2
Western
Elevation –
Flashing Failure
& Masonry
Wicking





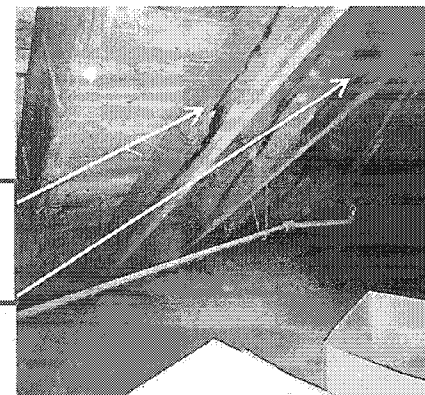
Attic- Chimney #1 –Eastern Southeastern Elevation Catch Pan, Plastic and Rags to Capture Rainwater- Floor Previously Saturated – Note Stains

Attic-Chimney #2 Interior Eastern Elevation- Roofers & Framing Previously Saturated

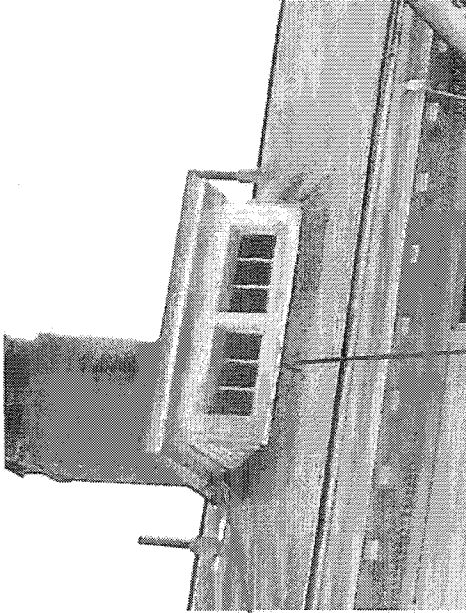


Attic- Left -Chimney #2 Western Elevation Truss Framing Previously Saturated – Note Stain

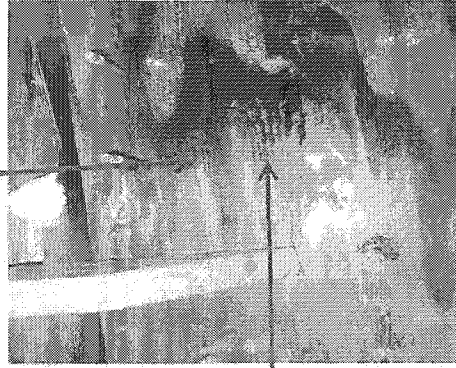
Attic – Right - East – Northeast Elevation- Rafters Show Signs of Previous Water Infiltration



North Elevation Dormer Copper Roof & Roof
Flashing Leaking Directly Into This Building



North Elevation -
Under The
Dormer Window
Flashing - Note
Water Stains



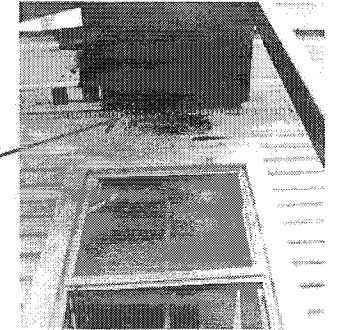
Third Floor Stairwell - Eastern Elevation - Under The Rear
Section of the Copper Roof



Western Elevation-The Primary Issues Here Are Very Much The Same – The Decomposing of The Drainage System – Along With The Concerns Regarding The Scheduling Preventive Maintenance



Above – Open Wood Trim
Failed Caulk Joint -Peeling Paint



Above- Failed Drainage System
Below- Full View of This Window
Requires Attention



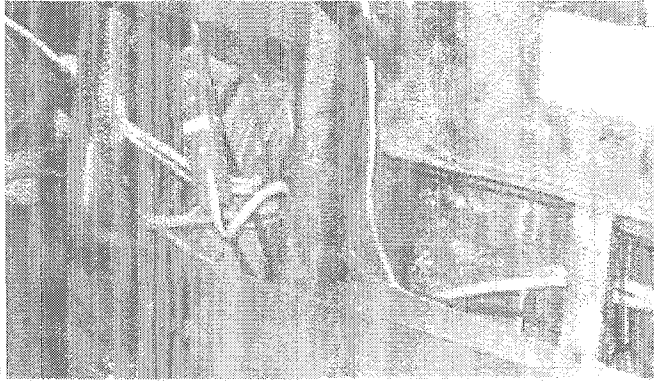
The O'Neil Theater Complex - Mansion House Building Evaluation Survey



Western Elevation – The Addition-
Note All of the Exposed Wood On
These Windows and Gutters – A
Typical Third & Attic Floor Condition.



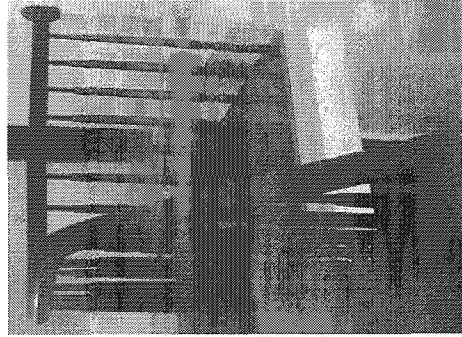
Attic – Northern Elevation -The Staff is Concerned About This Wiring as They Nor Does Their Electrician Understand Where Any of This Leads. There is More Than What is Shown in This Photograph



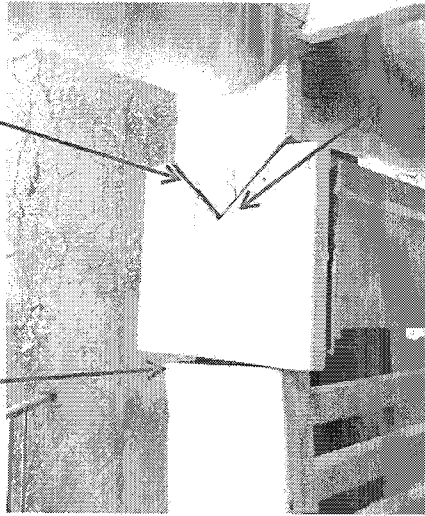
Attic- Southwestern Elevation – Near Water Infiltration – Wicking Chimney. Again Here The Staff Brought This to Our Attention



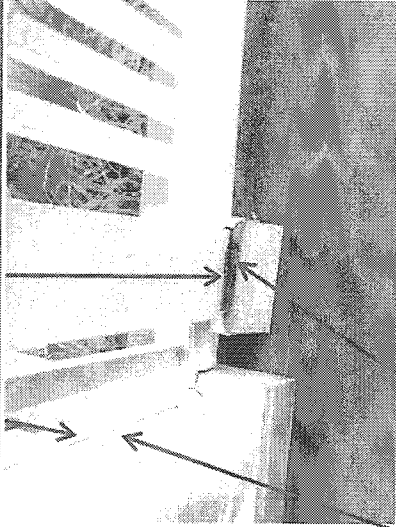
Third Floor – This Handrail is Very Unstable Immediate Attention to This is Recommended



The Separation From Minor Age Settlement
Is Demonstrated Here



Likewise Age Related Repair Required Here
The Bottom Trim is Just Leaning Against The Larger
Baluster



Rear Porch- Northern Elevation



The O'Neil Theater Complex - Mansion House Building Evaluation Survey

**TOWN OF WATERFORD
CAPITAL PROJECT REQUEST FORM**

DEPARTMENT/AGENCY Facilities	CONTACT PERSON Gary Schneider
PROJECT NAME Nevins Cottage Fund	DEPARTMENT PRIORITY 5

1	DESCRIPTION AND JUSTIFICATION (describe the type, purpose & anticipated accomplishments of the project) This project is being undertaken in partnership with the Planning Department. In the spring of 2020, the Town engaged GNCB Consulting Engineers to perform a structural assessment of the Nevins Cottage. The Cottage has been in disrepair for some time, and the Town has been exploring options to both save the building and to facilitate programming. GNCB provided the Town with a cost estimate of \$380,248. The estimate was written to ensure the Town's eligibility to apply for historic preservation grants of up to \$100,000. This estimate was shared with multiple groups, including the RTM Education Standing Committee as the group tasked with making recommendations about the next steps for Nevins Cottage. It was determined that until a use for Nevins is found, that the cost of historic renovation may not be warranted. This request is for a portion of the estimated cost, which would provide funds for the Town to partner with other organizations, fundraise, and/or seek appropriate renovation opportunities for Nevins. \$27,440 remains in the budget for the property, and it is recommended that these funds be used to complete small projects to avoid further deterioration. \$150,000 is requested in new funding to support future work and occupancy of the Cottage.																																																																													
2	PROJECT STATUS IF IN PROGRESS Structural and shell assessment and cost estimates for historic building restoration have been completed.																																																																													
3	LIST OTHER PROJECTS WITHIN YOUR DEPARTMENT OR ANOTHER DEPARTMENT THAT WILL BE IMPACTED BY THIS REQUEST 																																																																													
4	DESCRIBE THE IMPACT ON DEPARTMENT OPERATING BUDGET (include cost estimate if applicable) 																																																																													
5	GRANT FUNDING/OTHER FUNDING, if applicable (detailed explanation of grant/other funding, including the amount, source of funding, status, town match, if any. Attach award letter if available) Funding from the State Historic Preservation Office (SHPO) would be unlikely unless the Town undertakes the recommended project GNCB developed. That project is ready for grant applications and bidding should the determination to fund it be made. SHPO grants are unlikely to be received unless restoration is pursued. Other grant sources may be available, but it is important for the Town to define a use for the Cottage to support applications.																																																																													
6	ATTACH PLAN ESTIMATE, SERVICE AREA MAP AND/OR OTHER SUPPORTING DOCUMENTATION (if none, simply state that in the area below) See attached quote.																																																																													
7	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7" style="text-align: center;">COST/FUNDING SOURCE</th> </tr> <tr> <th style="width: 35%;">FUNDING SOURCE</th> <th style="width: 10%;">APPROVED FUNDING TO DATE</th> <th style="width: 10%;">FY2022</th> <th style="width: 10%;">FY2023</th> <th style="width: 10%;">FY2024</th> <th style="width: 10%;">FY2025</th> <th style="width: 10%;">FY2026</th> </tr> </thead> <tbody> <tr> <td>1 Current Year Capital</td> <td style="text-align: right;">27,440</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 Utility Budget/Sewer Cap Maint Fund</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 Transfer to CNR</td> <td></td> <td style="text-align: right;">150,000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 Short/Long-term Bonds</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5 LoCIP (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6 CNR Undesignated Fund Balance</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7 Federal/State Grants (detail in section 5)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8 Other Funding (detail in section 5 above)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTALS</td> <td style="text-align: right;">27,440</td> <td style="text-align: right;">150,000</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	COST/FUNDING SOURCE							FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026	1 Current Year Capital	27,440						2 Utility Budget/Sewer Cap Maint Fund							3 Transfer to CNR		150,000					4 Short/Long-term Bonds							5 LoCIP (detail in section 5 above)							6 CNR Undesignated Fund Balance							7 Federal/State Grants (detail in section 5)							8 Other Funding (detail in section 5 above)							TOTALS	27,440	150,000	0	0	0	0
COST/FUNDING SOURCE																																																																														
FUNDING SOURCE	APPROVED FUNDING TO DATE	FY2022	FY2023	FY2024	FY2025	FY2026																																																																								
1 Current Year Capital	27,440																																																																													
2 Utility Budget/Sewer Cap Maint Fund																																																																														
3 Transfer to CNR		150,000																																																																												
4 Short/Long-term Bonds																																																																														
5 LoCIP (detail in section 5 above)																																																																														
6 CNR Undesignated Fund Balance																																																																														
7 Federal/State Grants (detail in section 5)																																																																														
8 Other Funding (detail in section 5 above)																																																																														
TOTALS	27,440	150,000	0	0	0	0																																																																								



Consulting Engineers, P.C.

Structural Engineering
Geotechnical Engineering
Historic Preservation

September 30, 2020

Abby Y. Piersall, AICP
Planning Director, Town of Waterford
15 Rope Ferry Road
Waterford, CT, 06385
(860) 444-5813
apiersall@waterfordct.org

Principals
Charles C. Brown, P.E.
James F. Norden, P.E.
Amy Jagaciewski, P.E.

Principal Emeritus
Kenneth Gible, P.E.

Geotechnical Associate
David L. Freed, P.E.

Structural Associate
Richard A. Centola, P.E.

Re: Nevins Cottage
Structural Stabilization and Exterior Rehabilitation
Opinion of Probable Cost

Dear Ms. Piersall:

The following presents the Opinion of Probable Cost for the work outlined in our September 30, 2020 Construction Documents for Grant Submissions. A breakdown of these costs can be found in Appendix A.

Base Bid (Structural Stabilization and Exterior Rehabilitation)

Location	Summary	Estimated Cost
Rear Addition	Removal	\$2,823
Porch	Post dutchman, concrete slab, wood framing and decking	\$3,704
Basement	Crushed stone, vapor retarder, footings, slab-on-grade, brick repointing	\$21,181
Sill Replacement	Shoring, sheathing removal, replacement in kind with historic connections, sheathing reinstallation	\$23,050
1st Floor	Structural reinforcement, new stairs, decking replacement	\$3,753

1358 Boston Post Road
P.O. Box 802
Old Saybrook, CT 06475
Tel 860 389 1224
racina@gncbengineers.com
gncbengineers.com

Mudroom	New foundations and structural reinforcement	\$21,579
Low Roof (Kitchen)	Structural reinforcement	\$7,163
Roof	Removal of trim, removal of soffit, rafter reinforcing, trim and soffit reinstallation	\$3,776
Site	Concrete cap + basement door; excavation and window wells at vents	\$2,646
Exterior	Replace cladding, rehabilitate windows/doors, gutters	\$141,677
Glazing	Allowance	\$600
Electrical	Allowance	\$5,000
Lighting	Allowance	\$2,400
Total Estimated Cost of Base Bid:		\$239,352
Total Estimated Cost of Base Bid (Including Labor, Materials, Permit, Other Fees, & Contingency)*:		\$376,978

Add Alternate No. 1 (Cut and Grind Holly Tree)

Discipline	Summary	Estimated Cost
Cut and Grind Holly Tree	Cut and grind holly tree	2,040
Total Estimated Cost of Add Alternate No. 2		\$2,040
Total Estimated Cost of Add Alternate No. 2 (Including Labor, Materials, Permit, Other Fees, & 15% Contingency)*:		\$3,270

Total Estimated Cost Base Bid and Add Alt. No. 1 (Including Labor, Materials, Permit, Other Fees, & 15% Contingency)*:	\$380,248
---	------------------

Please review this estimate and let us know if you have questions or comments.

Very truly yours,

Amy Jagaczewski

Amy Jagaczewski, P.E./Principal

Appendix A: ACE Cost Estimates

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
GENERAL REQUIREMENTS									
Personnel: Labor									
	Working Carpenter Foreman 50/50	5.00 wk	1,200.00	6,000	-	-	-	1,200.00 /wk	6,000
Personnel: Labor				6,000				/wk	6,000
Temp: Construction Aids									
7) Mudroom	Temporary Shoring 2" x 6" @16" OC	18.00 lf	28.12	506	7.00	126	-	35.12 /lf	632
2) First Fl	Temporary Shoring 2" x 6" @16" OC	18.00 lf	28.12	506	7.00	126	-	35.12 /lf	632
2) First Fl	Temporary Shoring 2" x 4" @12" OC	72.00 lf	18.75	1,350	6.00	432	-	24.75 /lf	1,782
2) First Fl	Temporary Shoring 2" x 4" @12" OC	10.00 lf	18.75	187	6.00	60	-	24.75 /lf	247
2) First Fl	Temporary Shoring Lite 2" x 4" @16" OC	32.00 lf	14.06	450	5.00	160	-	19.06 /lf	610
2) First Fl	1st Floor Temporary "A" Frame Shoring 2" x 4" @16" OC	35.00 ea	116.38	4,073	22.50	788	-	138.88 /ea	4,861
Temp: Construction Aids				7,073		1,692		/ea	8,764
GENERAL REQUIREMENTS				13,073		1,692		/mo	14,764
DEMOLITION									
Demo: Dumpsters									
1) Basement	30 yd Dumpster + 5 tons	4.00 ea	-	-	-	-	3,800	950.00 /ea	3,800
2) First Fl	30 yd Dumpster + 5 tons	1.00 ea	-	-	-	-	950	950.00 /ea	950
Demo: Dumpsters							4,750	/ea	4,750
Demo: General									
2) First Fl	Demo Rear Addition 1 story	100.00 sf	5.09	509	-	-	-	6.09 /sf	609
1) Basement	MEP/FP Debris Removal	2.00 day	813.76	1,628	-	-	-	849.76 /day	1,700
Demo: General				2,136				/sf	2,308
Demo: Concrete									
1) Basement	Remove Slab on Grade	600.00 sf	6.54	3,924	-	-	-	7.44 /sf	4,464
Demo: Concrete				3,924				/sf	4,464
Demo: Wood									
1) Basement	Remove Floor Joists Sub Floor Wd Flooring	12.00 sf	3.39	41	-	-	-	3.39 /sf	41
1) Basement	Remove Existing Temp Shores	3.00 ea	30.01	90	-	-	-	30.01 /ea	90
7) Mudroom	Remove Wood Framing For Re-Use	192.00 sf	2.03	391	-	-	-	2.03 /sf	391
7) Mudroom	Remove Ceiling Framing For Re-Use	65.00 sf	1.02	66	-	-	-	1.02 /sf	66
5) Roof	Remove Sheathing/ Roofing, Rafters Remain	260.00 sf	2.81	731	-	-	-	2.81 /sf	731
7) Mudroom	Remove Roof Rafters/Sheathing/Shingles	100.00 sf	2.81	281	-	-	-	2.81 /sf	281
2) First Fl	Remove Wood Deck & Decking	30.00 sf	3.00	90	-	-	-	3.00 /sf	90
2) First Fl	Remove Wood Decking	45.00 sf	1.27	57	-	-	-	1.27 /sf	57
1) Basement	Remove Flight Wood Stairs	1.00 ea	232.76	233	-	-	-	232.76 /ea	233
Demo: Wood				1,980				/sf	1,980
Demo: Insulation									
2) First Fl	Remove Batt Insulation	45.00 sf	0.20	9	-	-	-	0.20 /sf	9
Demo: Insulation				9				/sf	9
Demo: Doors & Windows									
2) First Fl	Remove Bilco Door	1.00 ea	101.72	102	-	-	-	101.72 /ea	102
Demo: Doors & Windows				102				/ea	102
Demo: Finishes, Ceilings									
3) Second Fl	Remove Plaster Ceiling For Rough Carp	164.00 sf	2.54	417	-	-	-	2.54 /sf	417
Demo: Finishes, Ceilings				417				/sf	417
Demo: Exterior Finishes									
2) First Fl	Remove Wood Clapboard Siding	130.00 sf	1.36	176	-	-	-	1.36 /sf	176
Demo: Exterior Finishes				176				/sf	176
Demo: Mechanical/Elect									
1) Basement	Remove/Dispose Oil Tank	1.00 ea	600.00	600	-	-	0	600.00 /ea	600
1) Basement	Remove/Dispose Furnace	1.00 ea	500.00	500	-	-	-	500.00 /ea	500
Demo: Mechanical/Elect				1,100				/sf	1,100
Demo: Elect									
1) Basement	Remove Dist Panel	1.00 ea	-	-	-	-	125	125.00 /ea	125
Demo: Elect							125	/sf	125

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
	DEMOLITION			9,844			4,875		15,431
	SITEWORK								
	Clear Site								
8) Site Work	Tree Remove	1.00 ea	160.00	160	-	-	-	1,120.00 /ea	1,120
8) Site Work	Excavate Stump and Remove	1.00 ea	120.00	120	-	-	-	840.00 /ea	840
1) Basement	Remove Misc. Rock/Earth Build up	5.00 cy	50.86	254	-	-	-	50.86 /cy	254
	Clear Site			534				/ea	2,214
	Earthwk: Cut & Fill Etc								
1) Basement	Dispose Spoils on Site	4.00 cy	6.12	24	-	-	-	14.62 /cy	58
1) Basement	Dispose Surplus	22.00 cy	6.12	135	-	-	-	14.62 /cy	322
2) First Fl	Dispose Surplus	2.00 cy	6.12	12	-	-	-	14.62 /cy	29
	Earthwk: Cut & Fill Etc			171				/cy	409
	Earthwk: Excavation All								
1) Basement	Excavate Footing By Hand	4.00 cy	67.81	271	-	-	-	67.81 /cy	271
1) Basement	Excavate Basement SOG By Hand	20.00 cy	67.81	1,356	-	-	-	67.81 /cy	1,356
1) Basement	Excavate For SOG	20.00 cy	4.08	82	-	-	-	9.74 /cy	195
2) First Fl	Excavate For SOG	2.00 cy	4.08	8	-	-	-	9.75 /cy	19
7) Mudroom	Excavate Footing By Machine	30.00 cy	4.08	122	-	-	-	9.74 /cy	292
7) Mudroom	Shape & Grade Footing	96.00 sf	0.51	49	-	-	-	0.51 /sf	49
	Earthwk: Excavation All			1,888				/cy	2,183
	Earthwk: Grading								
1) Basement	Fine Grade	590.00 sf	0.76	450	-	-	-	0.76 /sf	450
	Earthwk: Grading			450				/sy	450
	Backfill: Foot Wall Misc								
1) Basement	Backfill, Spoils By Hand	1.00 cy	50.86	51	-	-	-	50.86 /cy	51
7) Mudroom	Backfill Footings	26.27 cy	8.14	214	-	-	-	10.39 /cy	273
	Backfill: Foot Wall Misc			265				/cy	324
	Drainage: Drainage @ Slab								
1) Basement	Gravel At Slab	11.00 cy	10.00	110	50.63	557	-	64.83 /cy	713
2) First Fl	Crusher Run At Slab	0.56 cy	10.00	6	25.99	14	-	40.20 /cy	22
	Drainage: Drainage @ Slab			116		571		/cy	735
	SITEWORK			3,424		571			6,316
	CONCRETE								
	Forms: Footings								
1) Basement	Footing Forms	160.00 sf	2.86	458	1.29	208	-	4.15 /sf	664
1) Basement	Footing Forms	19.00 sf	2.86	54	1.29	24	-	4.15 /sf	70
7) Mudroom	Footing Forms	52.00 sf	2.86	149	1.29	67	-	4.15 /sf	216
7) Mudroom	Keyway In Footing	48.00 lf	0.86	41	0.93	45	-	1.79 /lf	86
	Forms: Footings			703		342		/sf	1,045
	Forms: Walls								
7) Mudroom	Wall Forms - Patent System	240.00 sf	2.15	516	1.03	247	-	3.18 /sf	763
	Forms: Walls			516		247		/sf	763
	Forms: Edgeform at Walks								
2) First Fl	EdgeForm 2x4 Random Length	60.00 lf	2.00	120	0.49	30	-	2.49 /lf	150
	Forms: Edgeform at Walks			120		30		/lf	150
	Forms: Blockouts								
7) Mudroom	Ledge Blockouts	72.00 sf	4.00	288	1.24	89	-	5.24 /sf	377
	Forms: Blockouts			288		89		/sf	377
	Forms: Screeds								
1) Basement	Screeds	590.00 sf	0.06	35	0.02	15	-	0.08 /sf	60
	Forms: Screeds			35		15		/sq	50
	Forms: Strip & Oil								
7) Mudroom	Strip/Oil Forms-Footings	52.00 sf	1.07	56	0.08	4	-	1.15 /sf	60
7) Mudroom	Strip/Oil Forms-Walls	240.00 sf	0.27	64	0.08	19	-	0.35 /sf	83
7) Mudroom	Strip/Oil Ledge Blockouts	72.00 sf	0.50	36	0.08	6	-	0.58 /sf	42
2) First Fl	Strip/Oil Forms-EdgeForms	60.00 sf	0.72	43	-	-	-	0.72 /sf	43

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
	Forms: Strip & Oil								
1) Basement	Strip/Oil Forms-All other	160.00 sf	0.54	86	0.08	12	-	0.61 /sf	98
1) Basement	Strip/Oil Forms-All other	19.00 sf	0.54	10	0.08	1	-	0.61 /sf	12
	Forms: Strip & Oil			295		42		/sf	337
	Forms: Snapties								
7) Mudroom	Snaptie 12 in.	52.00 ea	-	-	0.62	32	-	0.62 /ea	32
	Forms: Snapties					32		/ea	32
	Rebar: Footings								
7) Mudroom	Footling Rebar #3	12.00 lf	1.17	14	0.39	5	-	1.56 /lf	19
1) Basement	Footling Rebar #4	160.00 lf	0.20	33	0.49	78	-	0.69 /lf	111
7) Mudroom	Footling Rebar #5	72.00 lf	0.61	44	1.07	77	-	1.68 /lf	121
	Rebar: Footings			91		160		/ltn	251
	Rebar: Wiremesh								
1) Basement	Wiremesh 6x6 6/6	649.00 sf	0.06	39	0.41	267	-	0.47 /sf	306
2) First Fl	Wiremesh 6x6 10/10	33.00 sf	0.73	24	0.21	7	-	0.94 /sf	31
	Rebar: Wiremesh			63		274		/lsq	337
	Conc: Pile Caps/Spread Ftgs								
1) Basement	Pile Cap Conc 3000 psi	3.00 cy	26.35	79	128.75	386	-	155.10 /cy	465
1) Basement	Pile Cap Conc 3000 psi	0.56 cy	26.35	15	128.83	72	-	155.18 /cy	86
	Conc: Pile Caps/Spread Ftgs			94		458		/cy	552
	Conc: Footings								
7) Mudroom	Footling Conc 3000 psi	2.00 cy	42.16	84	128.75	258	-	170.91 /cy	342
	Conc: Footings			84		258		/cy	342
	Conc: Walls								
7) Mudroom	Wall Conc 3000 psi	3.56 cy	26.35	94	128.76	458	-	155.11 /cy	552
	Conc: Walls			94		458		/cy	552
	Conc: Slabs On Grade								
1) Basement	S.O.G. Conc 3000 psi	8.00 cy	97.13	777	128.75	1,030	-	225.88 /cy	1,807
	Conc: Slabs On Grade			777		1,030		/cy	1,807
	Conc: Walks								
2) First Fl	Walk Conc 3000 psi	0.37 cy	97.14	36	128.73	48	-	225.86 /cy	84
	Conc: Walks			36		48		/cy	84
	Finish: General								
1) Basement	Trowel Finish	590.00 sf	0.72	423	0.01	4	-	0.72 /sf	427
2) First Fl	Broom/Float Finish	30.00 sf	1.43	43	0.01	0	-	1.44 /sf	43
1) Basement	Rub, Cut, & Patch	160.00 sf	0.86	138	0.01	2	-	0.87 /sf	139
1) Basement	Rub, Cut, & Patch	19.00 sf	0.86	16	0.01	0	-	0.87 /sf	17
7) Mudroom	Rub, Cut, & Patch	240.00 sf	0.86	206	0.01	3	-	0.87 /sf	209
	Finish: General			826		9		/sf	835
	Finish: Protect & Cure								
1) Basement	CS 309 Curing Compound	590.00 sf	0.72	423	0.02	15	-	0.74 /sf	438
	Finish: Protect & Cure			423		15		/sq	438
	CONCRETE			4,445		3,505		/cy	7,950
	MASONRY								
	Stone Misc.								
2) First Fl	Remove Stone Treads for Re-use	10.00 sf	25.00	250			-	25.00 /sf	250
2) First Fl	Re-install Stone Treads	10.00 sf	54.99	550			-	54.99 /sf	550
	Stone Misc.			800				/lf	800
	Stone Veneer								
2) First Fl	Salvage Stone for Re-use	152.00 sf	5.09	773			-	5.09 /sf	773
7) Mudroom	Field Stone Veneer 4" (salvaged)	144.00 sf	30.02	4,322	21.00	3,024	-	51.02 /sf	7,346
	Stone Veneer			5,095		3,024		/sf	8,119
	Masonry Restoration								
1) Basement	Cut & Repoint Brick Chimney Bases 2 ea	128.00 sf	10.32	1,321	0.37	47	-	10.68 /sf	1,367
	Masonry Restoration			1,321		47		/lm	1,367

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
	MASONRY			7,216		3,071			10,287
	WOOD & PLASTICS								
	Division 6 Subcontractors								
7) Mudroom	Reassemble/ Reinstall Mudroom Ext. Wall	24.00 lf	93.74	2,250	-	-	-	93.74 /lf	2,250
7) Mudroom	Reassemble/Reinstall Mudroom Roof	100.00 sf	22.50	2,250	-	-	-	22.50 /sf	2,250
	Division 6 Subcontractors			4,499				/ea	4,499
	Anchors								
7) Mudroom	Sill Anchor 1/2" D x 16"	6.00 ea	1.33	8	4.37	26	-	5.70 /ea	34
7) Mudroom	Shot Anchors	12.00 ea	1.68	20	0.31	4	-	2.19 /ea	26
	Anchors			31		30		/ea	60
	Simpson Strong-Tie								
2) First Fl	LUS212 Joist Hanger	34.00 ea	2.34	80	1.04	35	-	3.38 /ea	115
2) First Fl	A35 Clip	24.00 ea	7.27	175	1.83	44	-	9.10 /ea	219
	Simpson Strong-Tie			254		79		/ea	334
	Fasteners: Nails/Screws								
7) Mudroom	Nails - 16d common	0.03 box	-	-	62.00	2	-	62.00 /box	2
7) Mudroom	Nails - 16d common	1.00 box	-	-	62.40	62	-	62.40 /box	62
7) Mudroom	Sheetrock Nails 1-3/4 x 10 ga.	0.38 lb	-	-	6.22	2	-	6.22 /lb	2
	Fasteners: Nails/Screws					67		/keg	67
	Framing: Plates								
7) Mudroom	Top Plates 2x4 RL	48.00 lf	4.69	225	0.60	29	-	5.29 /lf	254
7) Mudroom	Bottom Plate 2x4 RL	24.00 lf	2.08	50	0.60	14	-	2.68 /lf	64
	Framing: Plates			275		43		/mbf	318
	Framing: Plates PT								
2) First Fl	Remove Rotted Sill	130.00 lf	7.76	1,009	-	-	-	7.76 /lf	1,009
2) First Fl	Plates PT 2x4x10 6/5'	3.00 ea	15.00	45	6.66	20	-	21.66 /ea	65
7) Mudroom	Sill Plates PT 2x6 RL	24.00 lf	2.25	54	1.72	41	-	3.97 /lf	95
	Framing: Plates PT			1,108		61		/mbf	1,169
	Framing: Floor Joist								
7) Mudroom	Floor Joist 2x8 RL	14.00 lf	2.42	34	1.20	17	-	3.62 /lf	51
7) Mudroom	Floor Joist 2x8x12 12/6'	72.00 ea	14.06	1,012	14.31	1,030	-	28.37 /ea	2,043
	Framing: Floor Joist			1,046		1,047		/mbf	2,093
	Framing: Studs/Posts								
7) Mudroom	Studs 2x4x 8	24.00 ea	6.70	161	4.79	115	-	11.49 /ea	276
2) First Fl	Studs 2x4x 8 Sisters	130.00 ea	6.70	870	4.79	623	-	11.49 /ea	1,494
	Framing: Studs/Posts			1,031		738		/mbf	1,769
	Framing: Ceiling Joists								
2) First Fl	Modify Ceiling Joist to Rc've new Beam/Joist hngr	62.00 ea	9.70	601	0.01	0	-	9.71 /ea	602
	Framing: Ceiling Joists			601		0		/mbf	602
	Framing: Roof Rafters								
5) Roof	Rafters, Sister 2x4x 3"	44.00 ea	24.92	1,097	0.15	7	-	25.07 /ea	1,103
2) First Fl	Rafters 2x4x 8	12.00 ea	60.22	723	4.78	57	-	64.99 /ea	780
2) First Fl	Rafters 2x4x 8	12.00 ea	60.22	723	4.78	57	-	64.99 /ea	780
	Framing: Roof Rafters			2,542		121		/mbf	2,663
	Framing: Bridging Sets								
7) Mudroom	Bridging Sets (1 x 4)	11.00 ea	7.60	84	0.62	7	-	8.22 /ea	90
	Framing: Bridging Sets			84		7		/ea	90
	Framing: Beams & Headers								
1) Basement	Beams & Headers 2 2x6 2' 2ea 2 West Chimney	2.00 ea	25.00	50	10.00	20	-	35.00 /ea	70
1) Basement	Beams & Headers 2 2x6 3'	2.00 ea	25.00	50	10.00	20	-	35.00 /ea	70
7) Mudroom	Beams & Headers 2-2x8 3' Access Hatch	4.00 ea	55.24	225	4.77	19	-	61.01 /ea	244
2) First Fl	Beams & Headers 3 -2x10 12'	1.00 ea	70.30	70	41.18	41	-	111.48 /ea	111
2) First Fl	Beams & Headers 3- 2x10 16'	3.00 ea	70.30	211	54.91	165	-	125.22 /ea	376
	Framing: Beams & Headers			606		265		/mbf	871
	Framing: LVL's								
2) First Fl	LVL Sisters 1 3/4" x 5 1/2" LVL 2-6' 2-7"	28.00 lf	35.15	984	3.00	84	-	38.15 /lf	1,068
2) First Fl	1 3/4" x 5 1/2" LVL Sister Hips Low Roof 4/10'	40.00 lf	35.15	1,406	3.00	120	-	38.15 /lf	1,526

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
2) First Fl	Framing: LVL's 1 3/4" x 5 1/2" LVL @ 4"x6" 2/18"	36.00 lf	35.15	1,265	3.00	108	-	38.15 /lf	1,373
	Framing: LVL's			3,656		312		/mbf	3,968
2) First Fl	Framing: Laminated Lumber 5 1/4" x 5 1/4" PSL col PT Post Down 2/8"	16.00 lf	2.34	37	3.75	60	-	6.09 /lf	97
	Framing: Laminated Lumber			37		60		/lf	97
2) First Fl	Blocking: Misc. Blocking 2 x 6 RL 2' Sisters 45 ea	90.00 lf	10.00	900	2.00	180	-	12.00 /lf	1,080
	Blocking: Misc.			900		180		/mbf	1,080
2) First Fl	Heavy Timber Construction Sill Replacement PT 6"x6" Notch For Sister Studs	130.00 lf	55.00	7,150	2.81	365	-	57.81 /lf	7,515
	Heavy Timber Construction			7,150		365		/mbf	7,515
7) Mudroom	Plywood: Subfloor Subfloor 3/4" CDX Plywood	3.00 ea	28.12	84	10.40	31	-	38.52 /ea	116
	Plywood: Subfloor			84		31		/sf	116
2) First Fl	Subfloor: All Types Sub Flooring 1 x 6 T&G #2 Pine	70.00 sf	7.27	509	1.56	109	-	8.83 /sf	618
	Subfloor: All Types			509		109		/sf	618
7) Mudroom	Plywood: Wall Sheathing Wall Sheath 1/2" CDX ea	6.00 ea	35.15	211	23.92	144	-	59.07 /ea	354
	Plywood: Wall Sheathing			211		144		/sf	354
2) First Fl	Plywood: Roof Sheathing Roof Sheath 5/8" CDX ea Remove and Replace	6.00 ea	35.15	211	23.92	144	-	59.07 /ea	354
	Plywood: Roof Sheathing			211		144		/sf	354
	WOOD & PLASTICS			24,835		3,803			28,639
	FINISH CARPENTRY								
2) First Fl	Arch Wd Wrk: Decking 5-1/4" x 4" Vertical Grain Fir Decking	110.00 lf	1.16	128	1.25	137	-	2.41 /lf	265
	Arch Wd Wrk: Decking			128		137		/sf	265
2) First Fl	Arch Wd Wrk: Wood Columns 5" x 5" x 8' Wood Turned Colonial Column	1.00 ea	290.95	291	130.00	130	-	420.95 /ea	421
	Arch Wd Wrk: Wood Columns			291		130		/ea	421
7) Mudroom	Arch Wd Wrk: Wood Base Wood Base 1 Piece No Detail or Spec	48.00 lf	1.94	93	1.25	60	-	3.19 /lf	153
	Arch Wd Wrk: Wood Base			93		60		/lf	153
5) Roof	Arch Wd Wrk: Rakes/Gables Remove & Replace Existing Soffit	164.00 sf	2.33	382	-	-	-	2.33 /sf	382
	Arch Wd Wrk: Rakes/Gables			382				/lf	382
	FINISH CARPENTRY			894		327		/sf	1,221
	THERMAL & MOISTURE PROT								
7) Mudroom	Dampproofing: VapBarrier Sill Sealer	4.00 lf	1.13	5	0.10	0	-	1.23 /lf	5
7) Mudroom	Ty-Vek	96.00 sf	0.28	27	0.12	12	-	0.40 /sf	39
1) Basement	Moistop Vapor Barrier	619.50 sf	0.15	95	0.05	29	-	0.20 /sf	125
	Dampproofing: VapBarrier			127		41		/sq	168
7) Mudroom	Insulation: Batt Batt Insulation R-13 Kraft 3.5" x 15 1/2" Mudroom Roof	100.00 sf	0.38	38	0.36	36	-	0.73 /sf	73
	Insulation: Batt			38		36		/sf	73
7) Mudroom	Roof Shingles Composition Ice Shield Felt 30 lb.	1.00 sq	28.05	28	36.05	36	-	64.10 /sq	64
2) First Fl	Ice Shield Felt 30 lb.	2.00 sq	28.05	56	36.05	72	-	64.10 /sq	128
7) Mudroom	Lifetime 3 Tab Roof Shingles	1.00 sq	224.40	224	113.30	113	-	337.70 /sq	338
2) First Fl	Lifetime 3 Tab Roof Shingles	2.00 sq	224.40	449	113.30	227	-	337.70 /sq	676

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
	Roof Shingles Composition			757		448		/sq	1,205
	Wood Siding:								
2) First Fl	Replace Removed (Original) ClapBoards	130.00 sf	2.91	378	0.00	0	-	2.91 /sf	378
	Wood Siding:			378				/sf	378
	Sheetmetal: Flashing								
7) Mudroom	Flashing Copper 16 oz x 12"	16.00 lf	5.62	90	6.90	110	-	12.53 /lf	200
2) First Fl	Flashing Copper 16 oz x 12"	32.00 lf	5.62	180	6.90	221	-	12.53 /lf	401
7) Mudroom	Flashing: Copper Starter Course	24.00 lf	5.62	135	2.06	49	-	7.68 /lf	184
2) First Fl	Flashing: Copper Starter Course	36.00 lf	5.62	202	2.06	74	-	7.68 /lf	277
2) First Fl	Hip Flashing Copper 16 oz x 12"	20.00 lf	5.28	106	6.39	128	-	11.67 /lf	233
	Sheetmetal: Flashing			713		583		/lf	1,296
	THERMAL & MOISTURE PROT			2,013		1,108			3,121
	DOORS & WINDOWS								
	Doors Bilco Steel								
7) Mudroom	Access Door 24 x24	1.00 ea	58.19	58	300.00	300	-	358.19 /ea	358
	Doors Bilco Steel			58		300		/ea	358
	DOORS & WINDOWS			58		300			358
	GYP BD/METAL STUD								
	GWB: Boards & Sheathing								
7) Mudroom	GWB 5/8" All Size Regular	192.00 sf	0.58	112	0.34	65	-	0.92 /sf	177
	GWB: Boards & Sheathing			112		65		/sf	177
	GWB: Finish Mud/Tape								
7) Mudroom	Labor GWB Finish All Steps	192.00 sf	0.55	105	0.10	19	-	0.65 /sf	124
	GWB: Finish Mud/Tape			105		19		/sf	124
	GYP BD/METAL STUD			216		84			301
	STUCCO								
	Lath/Plastr: Lath								
3) Second Fl	Plaster Patch and Repair (3 Coat System)	164.00 sf	9.46	1,552			-	9.46 /sf	1,552
2) First Fl	Plaster Patch/Repair Clg @ Post Down	16.00 sf	-	-			144	9.00 /sf	144
	Lath/Plastr: Lath			1,552			144	/sf	1,696
	STUCCO			1,552			144		1,696

Estimate Totals

Description	Amount	Totals	Hours	Rate	Percent of Total
Labor	67,572		1,268.041 hrs		48.10%
Material	14,462				10.29%
Subcontract	5,019				3.57%
Equipment	3,032		36.580 hrs		2.16%
Other					
	90,085	90,085			54.13%
General Conditions	11,711			13,000 %	8.34%
	11,711	101,796			8.34%
Estimating Contingency	20,359			20,000 %	14.49%
Contractors O/P	18,323			15,000 %	13.04%
Total		140,478			

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Base Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
GENERAL REQUIREMENTS									
Utilities: Temporary									
All	Temp Toilet	4.00 mo	-	-	110.00	440	-	110.00 /mo	440
Temp: Protection									
All	Temp Floor Protection (Masonite)	1,324.00 sf	0.25	331	0.53	695	-	0.78 /sf	1,026
DEMOLITION									
Demo: Exterior Finishes									
6) Exterior	Remove Wood Clapboard Siding	1,560.00 sf	2.00	3,120	-	-	-	2.00 /sf	3,120
6) Exterior	Remove Running Trims	414.00 lf	1.00	414	-	-	-	1.00 /lf	414
6) Exterior	Remove Door/Window Trims	315.00 lf	1.00	315	-	-	-	1.00 /lf	315
Demo: Mechanical/Elect									
1) Basement	Remove/Dispose Furnace	1.00 ea	400.00	400	-	-	-	400.00 /ea	400
SITEWORK									
Earthwk: Cut & Fill Etc									
1) Basement	Dispose Spoils on Site	2.00 cy	40.01	80	-	-	-	40.01 /cy	80
6) Exterior	Dispose Surplus	2.00 cy	6.12	12	-	-	-	14.62 /cy	29
Earthwk: Excavation All									
1) Basement	Excavate Misc By Hand (Window Wells)	2.00 cy	76.29	153	-	-	-	76.29 /cy	153
6) Exterior	Excavate Misc By Hand	2.00 cy	76.29	153	-	-	-	76.29 /cy	153
Earthwk: Grading									
6) Exterior	Rough Grade	50.00 sf	0.12	6	-	-	-	0.25 /sf	13
6) Exterior	Fine Grade	509.00 sf	0.76	388	-	-	-	0.76 /sf	388
Backfill: Foot Wall Misc									
6) Exterior	Backfill, Rain Garden 1 1/2" Washed Stone	2.00 cy	16.29	33	30.00	60	-	50.79 /cy	102
1) Basement	Backfill, 3/4" Washed Stone @ Areaway	0.50 cy	40.02	20	30.00	15	-	70.02 /cy	35
Drainage: Site Structures									
1) Basement	Galv Areaway Semi Circ 30" w	2.00 ea	125.00	250	225.00	450	-	350.00 /ea	700
CONCRETE									
Forms: Walls									
1) Basement	Wall Forms - Basement Stair	44.00 sf	2.15	95	1.03	45	-	3.18 /sf	140
Conc: Walls									
1) Basement	Mortar Curb Basement Stair	1.00 cy	26.35	26	128.75	129	-	155.10 /cy	155
Finish: General									
1) Basement	Rub, Cut, & Patch Basement Stair	44.00 sf	0.86	38	0.01	1	-	0.87 /sf	38
FINISH CARPENTRY									
Arch Wd Wrk: Wood Stairs									
1) Basement	Interior Stair Oak Tread Pine Riser F/I	10.00 ri	70.30	703	100.00	1,000	-	170.30 /ri	1,703
1) Basement	Poplar Handrail & Brackets 2 ea/ 10'	20.00 lf	15.00	300	4.00	80	-	19.00 /lf	380
Arch Wd Wrk: Crown Mldg									
6) Exterior	Crown Moulding 4 5/8" Door B	6.00 lf	3.75	23	3.33	20	-	7.08 /lf	42
Arch Wd Wrk: Soffit/Eave									
5) Roof	Bead Board 5/8" Soffit Remove/Replace	32.00 lf	3.00	96	1.82	58	-	4.82 /lf	154
2) First Floor	Bead Board 5/8" x 4' x 8' Porch Ceiling	32.00 sf	5.00	160	1.82	58	-	6.82 /sf	218
Arch Wd Wrk: Door/Window									
3) Doors/Windows	Repair/Restore Door	3.00 ea	409.92	1,357	416.00	1,248	-	881.52 /ea	2,645
3) Doors/Windows	Remove/Replace Door	3.00 ea	232.76	698	-	-	-	232.76 /ea	698
Arch Wd Wrk: Shutters									
6) Exterior	Shuttercraft Shutters Window A	12.00 ea	174.57	2,095	456.00	5,472	-	630.57 /ea	7,567
6) Exterior	Shuttercraft Shutters Window B	1.00 ea	174.57	175	386.00	386	-	560.57 /ea	561
6) Exterior	Shuttercraft Shutters Window C	5.00 ea	174.57	873	357.00	1,785	-	531.57 /ea	2,658
6) Exterior	Shutter Hardware	1.00 ls	-	-	1,800.00	1,800	-	1,800.00 /ls	1,800
Arch Wd Wrk: Cedar									
6) Exterior	Cedar 2" x 2" Routed out Door Casing	66.00 lf	5.00	330	4.00	264	-	9.00 /lf	594
6) Exterior	Cedar 5/4" x 4" Widow Ext Sill Casing Ripped to Size	60.00 lf	2.00	120	3.15	189	-	5.15 /lf	309
6) Exterior	Cedar 5/4" x 6" Eave Rake Trims Remove/Replace 25% =	100.00 lf	3.00	300	3.25	325	-	6.25 /lf	625
6) Exterior	Cedar 5/4" x 6" Door Crown	8.00 lf	4.00	32	3.25	26	-	7.25 /lf	58
6) Exterior	Cedar 5/4" x 6" Routed Watertable	140.00 lf	5.00	700	3.25	455	-	8.25 /lf	1,155
6) Exterior	Cedar 2" x 4" Routed out Window Casing	234.00 lf	5.00	1,170	4.00	936	-	9.00 /lf	2,106
THERMAL & MOISTURE PROT									
Dampproofing: VapRBarrier									
6) Exterior	3/8" x 1 1/2" PT Lath	1,200.00 lf	0.78	931	0.05	62	-	0.83 /lf	993
6) Exterior	Rainscreen B.Obdyke	1,536.00 sf	0.78	1,192	1.03	1,582	-	1.81 /sf	2,774
6) Exterior	Ty-Vek	1,560.00 sf	0.28	439	0.12	190	-	0.40 /sf	629
6) Exterior	Poly Vapor Barrier 6 mil	75.00 sf	0.07	5	0.04	3	-	0.10 /sf	8
Metal Roof/Siding									
6) Exterior	Copper Roof 16 oz 3 Locations (Inc-removal)	50.00 sf	26.42	1,321	24.72	1,236	-	51.14 /sf	2,557
Wood Siding:									
6) Exterior	Cedar Clapboard Siding 1/2"x 6" 4" Exp.	1,560.00 sf	6.00	9,360	4.00	6,240	-	10.00 /sf	15,600
Sheetmetal: Flashing									
6) Exterior	Drip Cap Copper 16 oz x 6"	80.00 lf	2.00	160	6.18	494	-	8.18 /lf	654

Location	Description	Takeoff Quantity	Labor Cost/Unit	Labor Base Amount	Material Cost/Unit	Material Amount	Sub Amount	Total Cost/Unit	Total Amount
5) Roof	Sheetmetal: Gutter Dwn&Up Remove/Reinstall Existing Gutters Accessory Roof (General)	80.00 lf	20.00	1,600	-	-	-	20.00 /lf	1,600
6) Exterior	Ridge Vent B. Obdyke @ Watertable DOORS & WINDOWS Division 8 Subcontractors	140.00 lf	10.00	1,400	4.00	560	-	14.00 /lf	1,960
8) Doors/Windows	Remove & Replace Storm Windows	21.00 ea	75.00	1,575	500.00	10,500	-	575.00 /ea	12,075
8) Doors/Windows	Remove/Replace Window Type A	16.00 ea	145.48	2,328	-	-	-	145.48 /ea	2,328
8) Doors/Windows	Remove/Replace Window Type ,C,D	4.00 ea	116.01	464	2,400.00	9,600	-	2,516.01 /ea	10,064
8) Doors/Windows	Restore/Repair Window Type A	15.00 ea	600.00	9,000	75.00	1,125	-	975.00 /ea	10,125
8) Doors/Windows	Restore/Replace Windows B&E	3.00 ea	600.00	1,800	2,000.00	6,000	-	2,600.00 /ea	7,800
8) Doors/Windows	Restore/Repair Doors Doors Bilco Steel	3.00 ea	-	-	2,500.00	7,500	-	2,500.00 /ea	7,500
1) Basement	Bilco Door Basement Door Marvin Windows WUDH	1.00 ea	200.00	200	800.00	800	-	1,000.00 /ea	1,000
1) Basement	Marvin Basement Window 2610	2.00 ea	116.36	233	450.00	900	-	566.36 /ea	1,133
8) Doors/Windows	Marvin WUDH Basement 2610 Marvin Doors	2.00 ea	124.99	250	450.00	900	-	574.99 /ea	1,150
8) Doors/Windows	Marvin WIFD 2668 WUDH Storm Windows	1.00 ea	931.04	931	4,500.00	4,500	-	5,431.04 /ea	5,431
All	Storm Window F/I 1'8" x 2'6"	1.00 ea	-	-	-	-	150	150.00 /ea	150
All	Storm Window F/I 2'4" x 2'0"	2.00 ea	-	-	-	-	350	175.00 /ea	350
All	Storm Window F/I 2'4" x 4'0"	1.00 ea	-	-	-	-	300	300.00 /ea	300
All	Storm Window F/I 2'4" x 4'6"	16.00 ea	-	-	-	-	6,400	400.00 /ea	6,400
	PAINTING Painting: Commercial								
8) Doors/Windows	Scrape Sand Paint Wood Door	3.00 ea	429.74	1,289	6.25	19	-	435.99 /ea	1,308
8) Doors/Windows	Scrape Sand Paint Wood Window Type A	16.00 ea	214.87	3,438	10.00	160	-	224.87 /ea	3,598
8) Doors/Windows	Scrape Sand Paint Wood Window Type C,D Painting: Residential	4.00 ea	107.44	430	8.00	32	-	115.44 /ea	462
8) Doors/Windows	Paint Exterior Shingles/ Clapboard	1,536.00 sf	10.00	15,360	0.31	475	-	10.31 /sf	15,835
8) Doors/Windows	Prep: Scrape, Sand Fas/Soffit Rakes/Gables Corners	800.00 lf	5.37	4,297	0.64	515	-	6.02 /lf	4,812
	ELECTRICAL Electrical Complete								
	Allowance for Unforeseen Electrical Circumstances	1.00 ls	-	-	-	-	5,000	5,000.00 /ls	5,000
	ALLOWANCES Allowances								
6) Exterior	Cedar 5/4" x 6" Eave/Rakes Trim Remove/Replace 50%=-	200.00 lf	5.00	1,000	3.25	650	-	8.25 /lf	1,650
8) Doors/Windows	Glazing Allowance 15%	30.00 sf	-	-	-	-	600	20.00 /sf	600
All	Electrical Lighting Fixture Allowance Item 18	24.00 ea	75.00	1,800	25.00	600	-	100.00 /ea	2,400

Estimate Totals

Description	Amount	Totals	Rate	Cost per Unit	Percent of Total
Labor	75,806			67,085 /sf	31.62%
Material	70,580			62,460 /sf	29.44%
Subcontract	12,800			11,327 /sf	5.34%
Equipment	33			0.029 /sf	0.01%
General Conditions	20,698		##### %	18,317 /sf	8.63%
Estimating Contingency	26,987		##### %	23,883 /sf	11.26%
Building Permit	1,592		1.000 %	1,409 /sf	0.66%
Other					
	208,496	208,496		184,510 /sf	88.96%
Contractors O/P	31,274		##### %	27,676 /sf	13.04%
	31,274	239,770		212,186 /sf	13.04%
Total		239,770		212,186 /sf	100.00%