

General Notes, Specifications and Schedules



Historic Rehabilitation of the:

HEARSE HOUSE

207 Calvert Street
Chestertown, Kent County, MD

Prepared May, 2025

Issued for Bid June 27, 2025

GENERAL CONDITIONS / SUPPLEMENTAL SPECIFICATIONS – ISSUE FOR BID

Architect's Project #23-3368
443-282-8884
Barton@BartonRoss.com

Engineer Jay Silcox, PE
410-490-1839
jay@jhsilcoxpe.com

Special Note:

Built in 1906, the Yellow/Hearse House played an important role in Kent County's rich heritage, serving as the primary funeral parlor for the local African American community. It was moved to its present location at 207 Calvert Street, on the property of the Kent County Library, in Chestertown, Kent County, Maryland circa 1957. The building is listed on the National Register of Historic Places as part of the Chestertown Historic District on April 15, 1970, and is architecturally significant. The project is being funded through grant and preservation program funding, meaning stewardship of the property requires sensitivity to the architectural and historic character of this building, as identified in the specifications and drawings. All work must follow the *Secretary of the Interior's Standards for Rehabilitation of Historic Properties* and all applicable building codes: <https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf>

I. Overall Project Description

1. This document is appended to the Architect and Engineer's Specifications & Drawings for the Historic Rehabilitation project for the Hearse House located in Chestertown, Kent County, Maryland.
2. All scope of work and other conditions not discussed in this appended document are expected to be identified in the drawing package. Any discrepancies between the items in this appended document and the drawing package if identified by the Contractor shall be brought to the attention of the Owner, Kent County Public Library, and the Architect/Engineer during the bidding process.
3. Time is of the essence as related to the work on this project.

II. General Conditions

1. The General Conditions, Scope of Work, Architect's Specifications, Drawings and /or other attachments as applicable shall be included within the contract for execution, anticipated to be in American Institute of Architects (AIA) standard format, latest current edition.
2. No verbal changes to the contract will be accepted. Any proposed changes following contract award must be made in writing to the Architect at Barton Ross & Partners, LLC, Attn: Barton Ross, 503 Washington Ave. Ste. 184, Chestertown, MD 21620, telephone 443-282-8884, Barton@BartonRoss.com
3. Owner shall be responsible for securing all Letters of Completion, Release of Liens, and / or other documentation as required in compliance with all regulations of agencies having jurisdiction, in coordination with contractor(s) performing the work.

4. The Contractor shall inspect the site before submitting this bid in order to verify all field conditions / dimensions and be completely familiar with all phases of the work herein specified. Contractor is responsible to have full knowledge of all conditions and other adjacencies of the site affecting performance of the work.
5. Contractor shall thoroughly examine and be familiar with all requirements of the specification / bid. The failure or omission of any Contractor to fully examine the bid and site conditions shall in no way relieve the Contractor from any obligations with respect to performance of the proposed contract and the contemplated work therein, for the consideration set forth by the Contractor in the bid submission.
6. **Pre-submission Site Visit:** A site visit / walk-through for prospective Contractors is scheduled for **12:00 p.m., Wednesday, July 16, 2025** at the building. Attendance is not mandatory for Contractor's bid response to be considered, however, it is strongly recommended that Contractors participate in this field visit for clarification of scope of work as necessary prior to submitting the bid.
7. **Bid Submission:** The sealed response to this bid request should be marked "**Bid # 25-01**" and endorsed on its face with the name of the person, firm or corporation making such bid, with date of mailing / presentation. Submit bids to the Director of Office Administration, Kent County Public Library ("KCPL"); Attn: Chris Walmsley; 408 High St, Chestertown, MD 21620; Telephone: 410-778-3636 Ext. 2110; Email: admin@kentlib.org
8. Bid response documents must be received by KCPL via mail, messenger or walk-in on or before **2:00 p.m., Thursday, August 7, 2025**, at which time the bids will be opened for evaluation and consideration by KCPL. Contract is anticipated to be awarded as soon as practical following the opening / review of bids, with the job schedule to be identified at time of bid award.
9. In lieu of scheduled site visit, Contractor may elect to schedule site visit(s) in a timely manner for responding to bid by contacting either of the following individual(s) who will arrange access to the building / grounds and who can respond to questions regarding the bid that may require issuance of addendum(s):

Chris Walmsley, 410-778-3636 Ext. 2110 or admin@kentlib.org

10. The bid submission document, which includes Pricing, Exceptions to Bid Requirements, References and Hold Harmless Agreement, in addition to any other documentation as indicated in the Architect's bid package, shall be submitted to the attention of:

Kent County Public Library ("KCPL")
Attn: Chris Walmsley, Director of Office Administration
408 High St, Chestertown, MD 21620
Telephone: 410-778-3636 Ext. 2110
Email: admin@kentlib.org

11. Contractor shall submit with the bid response three (3) references for construction work of the same general character as that specified herein, which should include the installation of slates for historic properties, reference to applicable certification(s) / license(s) as required, and name of a bank or other financial institution regarding the financial responsibility of the Contractor (see submission form).
12. The price(s) submitted for this bid shall be net and must include all mobilization, overhead, and profit.
13. KCPL reserves the right to accept this bid by item, section or as a whole, or in its discretion to reject all responses to the bid. Also reserved is the right to reject, for cause, any responses in whole or in part, to waive technical defects, qualifications, irregularities and omissions if in its judgment the best interests of the Kent County Public Library will be served.

14. KCPL reserves the right to award the contract or any part thereof to the lowest priced qualified Contractor, make award to a Contractor which KCPL, in its sole discretion deems best qualified to perform the work, or make no award, as will best promote the Kent County Public Library 's interest, taking into consideration the reliability of the Contractor, quality of the project to be furnished, conformity with the specifications / drawings, the purposes for which required, and the terms of delivery, scheduling or other performance of the work.
15. Payment will be made by KCPL to the Contractor only upon presentation of correctly itemized invoices (i.e. utilizing standard AIA format). Payments of any invoice(s) shall not preclude Kent County Public Library from making claim for adjustment on any item found not to be in accordance with the general conditions and specific requirements of the contract. KCPL may withhold ten (10) per cent of the total contract value as retainage for correction of punch list items, which shall be completed to the satisfaction of KCPL and Architect in a timely manner.
16. KCPL will entertain advance payment to the Contractor of up to one-third (1/3) of contract value upon execution of the contract, however, based on mobilization, which includes the set-up of any scaffolding, with one-third (1/3) progress payment to follow approximately mid-point during execution, for work completed to date as approved by the Architect, with final payment upon completion of work (as approved by the Architect), less 10% retainage as applicable. All payment terms, however, are to be guided by the requirements of payment terms as per Kent County Public Library 's agreement with the grantor for this project.
17. In the event of any breach of the terms of the contract by the Contractor, KCPL shall have, in addition to any other recourse, the right to terminate the contract upon no less than ten (10) days written notice to the Contractor, return receipt requested. In such event, the Contractor shall be reimbursed for the expenditure(s) incurred for any satisfactory work completed under the contract prior to the date of termination.
18. Notwithstanding the above, the Contractor shall not be relieved of any liability to Kent County Public Library for damages sustained by KCPL for virtue of any breach of the contract by the Contractor, and KCPL may withhold any payment to the Contractor until such time as the exact amount of damages due KCPL from the Contractor is determined.
19. Contractor shall not be held liable or responsible for any loss, damage or delay resulting from causes beyond the Architect's control such as fire, flood or other condition that would interfere with performance of work under this agreement.

III. Insurance Requirements

- A. Commercial General Liability Insurance - "Occurrence" form which may include Premises-Operations, Products-Completed Operations, Contractual, Personal Injury, Owner-Contractor Protective and Fire Damage Legal Liability. Coverage shall have a combined single limit of not less than \$1,000,000 per occurrence. The insurance carried pursuant to this paragraph shall include coverage for contractual liability, independent Contractors' liability and completed product / operations liability with a personal injury endorsement.
- B. Comprehensive Automobile Liability Insurance - On owned, hired, leased or non-owned vehicles in the amount of \$1,000,000 per occurrence, Combined Single Limit. Policy should include code 1 - "any auto" and Insurance Services Office (ISO) endorsement CA0029 (Edition 12/88) - Changes in Business Auto and Truckers Coverage or updated / current applicable endorsement.
- C. With regard to Commercial General Liability, Optional Excess Liability and Comprehensive Automobile coverage's, the policies shall be endorsed to contain the following provisions:

1. Contractor's insurance coverage shall be primary insurance as respects Kent County Public Library .
 2. Any insurance or self-insurance maintained by the Kent County Public Library shall be excess of the Contractor's insurance and shall not contribute to it.
 3. Kent County Public Library shall enjoy all rights and privileges of the policy contract without the responsibility of paying premiums.
 4. Contractor shall provide a copy of the endorsements amending the policies, listing Kent County Public Library as additional insured.
- D. Workers' Compensation and Employers Liability - Statutory Workers' Compensation and Employers Liability Insurance for all of the Contractor's employees to be engaged in work under the contract and, if such work is sublet, the Contractor shall require sub-contractor(s) to maintain similar coverage for all of the employees.
- E. Optional Excess Liability Insurance - If Excess Liability ("following form") Insurance is provided with a minimum limit of \$1,000,000, underlying limits can be reduced to \$500,000.
- F. Within fifteen (15) days after notification of recommendation to award the work under this specification, a copy of the insurance certificate(s) shall be provided to Kent County Public Library by Contractor or Contractor's insurance company.
- G. Contractor hereby agrees to defend, indemnify and hold harmless Kent County Public Library from and against any and all liability, loss, damage, claim or action, to the extent permissible by Law, arising out of the operations performed or services provided by the Contractor under the contract (see bid submission form).

Kent County Public Library ("KCPL")
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408 High St, Chestertown, MD 21620
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BID RESPONSE

Base Bid – Contractor to provide all labor and materials necessary for selective demolition, foundation, structural repairs and other architectural repair work as applicable for Kent County Public Library as follows:

Historic Rehabilitation project:

A. Total Construction Fee for Historic Rehabilitation: \$ _____

Amount in Words: _____

If awarded the Contract, the undersigned agrees to furnish Performance and Payment Bonds with limits of not less than one hundred percent (100%) of the Bid amount (including selected Alternates and/or Allowances) to Kent County Public Library prior to execution of the Contract. The premium for such bonds is NOT included in the Lump Sum Base Bid given above.

The bidder agrees that this bid proposal represents an irrevocable offer to the Kent County Public Library which may be accepted by Kent County Public Library on or before the close of business one hundred eighty (180) calendar days after closing of the Bids. A Bid may not be modified, withdrawn or canceled by the Bidder for the period of time stipulated in the Invitation to Bid, and the Bidder so agrees in submitting its Bid.

Company Name Date

Address / Telephone / FAX

Name of Contractor Title

Signature of Contractor

e-mail address

Website License # EIN

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EXCEPTIONS TO BID REQUIREMENTS

Contractor shall provide any exceptions to the specific requirements stated in this bid document; use additional sheet(s) as required; if none, so state:

The bid is based on the Scope of Work delineated in the Architect's Bid Documents (Drawings, Specifications, and Addenda) issued prior to the execution of a Contract, which together with the Agreement, will form the Contract Documents with which this Project shall be constructed. The Contractor acknowledges that the Drawings and Project Manual contents are consistent with the List of Drawings and Project Manual Table of Contents provided for this Project. The undersigned certifies that any and all defects, errors, inconsistencies or omissions in the Bidding Documents of which it is aware, either directly or by notification from any subbidder or material supplier are noted on a list attached to the Bid Form.

If none, enter "NONE": _____

By entering "NONE" the Bidder attests and affirms that it is familiar with the nature of the Work and the complete scope represented in the Architect's Bid Documents to the extent that the Bidder hereby warrants that no claims shall be made against Barton Ross & Partners, LLC Architects or Silcox Engineering & Drafting, Inc., based on defective design documents or ambiguities attributed to the representation of the Scope of Work documented therein. _____(initial)

Company Name	Date
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Name of Contractor	Title
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Address	Telephone	FAX
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Signature of Contractor	e-mail address
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Website	License #	EIN
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Website	License #	EIN
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HOLD HARMLESS CERTIFICATE

1. The Contractor agrees to defend at its own risk and expense any and all suits, actions, or legal proceedings which may be brought or instituted against Kent County Public Library, its agents, officers, or employees for any such claim, demand, or cause of action, and the Contractor shall pay and satisfy any judgment or decree which may be rendered against Kent County Public Library, its agents, officers, or employees in any such suit, action, or other legal proceeding, for anything related to the contract and services provided by the Contractor.
2. If the persons or property of Kent County Public Library and of others sustain loss, damage or injury resulting from the negligence or carelessness of the Contractor, or its sub-contractors, in the performance of the contract and including any loss, damage or injury resulting from the failure to comply with any of the provisions of this contract or of law, the Contractor shall indemnify and hold Kent County Public Library harmless for any and all claims and judgments and damages and from costs and expenses to which Kent County Public Library may be subjected or which it may suffer or incur by reason thereof.

_____ Company Name		_____ Date	
_____ Address		_____ Telephone	_____ FAX
_____ Name of Contractor		_____ Title	
_____ Signature of Contractor		_____ e-mail address	
_____ Website	_____ License #	_____ EIN	

1. GENERAL DATA:

A. GENERAL CONDITIONS: A201-2017 General Conditions of the Contract for Construction (Standard Documents of the American Institute of Architects) is made part of this contract. Copies of these documents are available from the Architect upon request.

B. LAWS, ORDINANCES AND PERMIT: The Contractor shall give all notices, obtain all permits, licenses, certificates of inspection, of approval, of occupancy and other such instruments required for this work, and pay all costs and fees for them. The Contractor shall make all necessary arrangements for the connections of utilities and pay the charges for them. The Contractor shall obtain and pay for the building permit.

C. OUTLINE OF THE SCOPE OF WORK:

1. Refer to Front End docs for more information.
2. Selective demo as shown on the plans, including the interior meeting room.
3. Structural reinforcements as indicated.
4. New wood flooring, wall & ceiling finishes, interior doors, interior lighting, equipment, and interior trim throughout.
5. New custom wood storm windows and roller shades as indicated on the drawings.
6. New toilet, HVAC registers, electrical, and roof repairs as indicated on the drawings.
7. General cleanup, sealing and painting of all new surfaces throughout.
8. Site improvements & landscaping (by others).

D. ALTERNATES:

1. Repair or replacement of gutters and leaders.

E. SEPARATE CONTRACTS: If the bidder chooses, will be taken for:

1. The general construction work of the additions and alterations to the building listed above.
2. Site work (driveway improvements, wood split-rail perimeter fence, terrace, walks, steps, retaining walls, etc.), landscape planting and finished grading. Rough grading only by the General Contractor.
3. Roof or Master Masonry Contractors. (Provide a separate price).
4. Security / burglar alarm system by others. Audio/video system by others. (if any per Owner)

F. MATERIAL ALLOWANCES:

1. Contractor shall include installation of all material allowance items in the Base Bid.
2. Allowances will be equal to the Contractor's invoice price including tax.
3. All appliances, fixtures, fittings, and hardware will be selected by Owner and supplied and installed by the General Contractor.
4. Contractor to use the following allowances, if needed:

Items	Allowance	Quantity
Interior door hardware (Including hinges)	\$575 per door	see plans
Marble/Travertine tile	See tile section specifications	see plans
Decorative light fixtures	\$600 each	see plans
Toilet Paper Holders	\$30 each	1
Toilets	\$750 each	1

Bathroom Mirrors	\$400	1
Closet shelving, hooks per Owner	\$350 each	1
Pantry cabinetry	Provide paint allowance	See plans
Kitchen cabinetry, appliances, countertops	By others	
Kitchen sink	\$1,000 each	1
Kitchen faucet	\$500 each	1
Building permit/MDIA/Fire Marshal reviews	Provide \$4,000 allowance	

G. SUBMITTALS AND SAMPLES:

The Contractor shall submit a schedule for the construction work of the project to the Owner and the Architect. The Contractor shall advise the Owner of any long-lead items and/or time sensitive decisions that may impact the schedule.

The Contractor shall make arrangements for the payment schedule with the Owner. A copy of the payment schedule shall be submitted to the Owner for preliminary review.

The Contractor shall submit samples and/or catalog cuts of all substitutions of specified items to the Owner and the Architect. This includes period appropriate iron hardware.

The Contractor shall submit to the Owner and the Architect, for review and approval, catalog cuts and/or samples of the following items: roofing, brickwork, siding, wood trim, interior doors, door hardware, wood trim, cabinetry selections, tile, paint colors, lighting fixtures, flooring and roofing.

H. SUBSTITUTIONS: All voluntary substitutions by the Contractor shall be submitted for the review and approval of the Owner and the Architect prior to construction, installation or fabrication of the item for this project. Submittals shall include all pertinent information including catalog cuts, samples, or mock-ups of both the originally specified item and the proposed substitution, as required by the Architect to render a decision on the validity of the Contractor's substitution. The Contractor shall pay for the Architect's time to review the material at the Architect's standard hourly rates regardless of whether the Architect's decision determines the substitution to be acceptable or not. Where a Contractor proposes to use an item other than that specified or detailed on the Documents, which requires any redesign of the structure, partitions, piping, wiring, or any other part of the mechanical, electrical, or architectural layout, all such redesign, and all new drawings and detailing required shall, with the approval of the Architect, be prepared by the Contractor at the Contractor's own expense.

I. COMPLIANCE: All work shall comply with all applicable Federal, State and Municipal codes, laws, regulations, ordinances and covenants. The Contractor is responsible to notify the Owner and Architect of any discrepancies or non-conformities in plans and to bear all costs arising from rectifying work knowingly performed contrary to law or best practice.

J. QUALITY OF THE WORK: All work shall be in accordance with the best accepted trade practice, and all materials shall be the best grade for their purpose. Minor details not usually shown or specified, but necessary for proper and acceptable construction, installation, or operation of any part of the Work, as determined by the Architect, standards of good workmanship and best trade practices shall be included in the Work the same as if herein specified or indicated.

K. GUARANTEE: Except as otherwise noted, the Contractor shall guarantee all work against defects for one (1) year from the date of substantial completion. The necessary repairs or changes shall include correcting any defective or inferior work and correcting all damage to property caused by such work or by correcting it.

L. CONDUCT OF THE WORK:

1. The Contractor shall provide all necessary enclosures, barriers, scaffolding, ladders, etc., as required for safety and for the control of dust and debris during construction.

2. Lines, levels and grades: The Contractor shall verify all dimensions prior to the beginning of actual construction, lay out all work and establish all points, grades, lines and levels for the complete project and shall assume all responsibility for them.
3. Each day, the Contractor shall clean up all trash, waste and refuse materials of any nature resulting from the work. The removal of all trash, debris, etc., shall be the responsibility of the Contractor.
4. Upon completion of the Work, the entire project is to be completely cleaned and the site restored to existing condition including, but not limited to, the following:
 - Complete sweeping of all areas and the removal of all rubbish and debris, except that which is caused by the Owner or others doing N.I.C. Work.
 - Removal of all temporary enclosures and barricades, all temporary offices, telephone, sanitary facilities, etc.
 - Removal of all labels from glass, fixtures and equipment, etc., and spray cleaning of all glass and mirrors.
 - Removal of all stain and paint from glass, hardware, finished flooring, cabinets, etc.
 - Restoration of property by filling of all ruts with raked topsoil and making repairs to damaged asphalt paving.
 - The Contractor shall not be responsible for replanting shrubs and/or landscaping.
5. The Contractor shall continuously maintain adequate protection of all work and materials from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. The Contractor shall maintain adequate insurance for protection under "Workmen's Compensation," claims for personal injury and other insurance as required by local codes and best practice. Fire Insurance will be carried by the Owner, on 100% of the insurable value of structure, not including the Contractor's tools or equipment.
6. The Contractor shall be responsible for protection of all existing and new conditions and materials within and adjacent to the construction area. The Contractor shall keep the work site free from debris and accumulated refuse and shall have sole responsibility for protecting all dangerous areas from entry by unauthorized parties.

M. SPECIAL CONSIDERATIONS:

1. The Contractor shall endeavor to blend existing and new aspects of this project as smoothly as possible, matching levels, surfaces and finish materials wherever possible unless specifically noted otherwise in the drawings. The Contractor shall verify measurements prior to construction due to potential irregularities in the existing structure.
2. All patching shall be done in new matching or approved salvaged material. Finish materials shall be continuous to match existing, to the nearest break in plane or direction. Unused salvaged materials shall be stored where requested by the Owner. All salvaged materials are the property of the Owner.
3. Temporary Facilities:
 - Electrical power for hand tools and temporary lighting shall be provided by the Owner.
 - Toilet facilities shall be provided by the Contractor. (Port-o-San)
 - Temporary heat in the area of construction shall be provided by the Contractor.
4. Owner will utilize the house during construction. Contractor to review scheduling of construction of additions, interior demolition, kitchen renovations, etc. with the Owner during bidding. Contractor to provide temporary kitchen per owner if required. Verify location with Owner.

N. EXAMINATION OF SITE, DRAWINGS AND SPECIFICATIONS:

1. The Contractor shall carefully examine the site and these Construction Documents to determine the complete Scope of the Work and be informed of the existing conditions prior to submitting his bid proposal. The Contractor will not be entitled to extra compensations for errors or oversights resulting from his examination. The Contractor shall not scale the drawings to determine dimensions. The Contractor shall notify the Architect of any discrepancies in the drawings and specifications.
2. All dimensions and conditions shown and assumed on the Documents must be verified at the site by the Contractor before ordering any material or doing any work. No claims for extra compensation, based on ignorance of the visible or implied existing conditions will be considered. Any discrepancies or errors in the Documents must be reported to the Architect at once. No change in plans, details or dimensions is permissible without the consent of the Architect. Should the Contractor fail to notify the Architect within a reasonable time, the Contractor shall be responsible for the cost of rectifying such errors.
3. The Architect has indicated and estimated certain conditions which were not accessible for field surveying prior to preparing the Documents. The Architect therefore takes no responsibility for the accuracy of these estimated conditions and has shown work requirements on the Documents for Bidding scope only. The Architect will furnish more detailed information during construction when areas are actually accessible and measurable, by the Contractor(s). Where conditions that are uncovered are not as anticipated or not considered normal by the Architect, the Contractor may be entitled to an extra sum of money commensurate with the work entailed, after submission of a detailed breakdown of costs and after approval by the Architect and the Owner.
4. The Contractor bid is based on the Scope of Work delineated in the Drawings, Specifications, and Addenda issued prior to the execution of a Contract, which together with the Agreement, will form the Contract Documents with which this Project shall be constructed. The Contractor acknowledges that the Drawings and Project Manual contents are consistent with the List of Drawings and Project Manual Table of Contents provided for this Project. The Contractor further certifies that any and all defects, errors, inconsistencies or omissions in the Bidding Documents of which it is aware, either directly or by notification from any subbidder or material supplier are noted on a list attached to the Bid Form.
5. Contractor attests and affirms that it is familiar with the nature of the Work and the complete scope represented in the Bid Documents to the extent that the Bidder hereby warrants that no claims shall be made against Barton Ross & Partners, LLC Architects based on defective design documents or ambiguities attributed to the representation of the Scope of Work documented therein.

O. DEMOLITION:

1. Contractor shall provide temporary shoring during demolition so that existing historic structure is not undermined.
2. Contractor shall take special care daily to ensure that dust and construction debris be contained in the areas of demolition.
3. Contractor shall take special care to protect existing tombstones, trees, shrubs, plantings, etc. and shall be responsible for replacement if damaged.
4. Contractor shall provide and pay for an on-site dumpster. Construction debris shall not be allowed to accumulate around the site.
5. Contractor to coordinate with the Owner regarding any items that she may wish to retain or reuse.
6. All construction materials and debris that the Owner does not want shall be removed from the site.
7. All demolition work to be coordinated with Owner per their preliminary project schedule. All trash and

debris to be cleaned up daily and disposed of in job-site dumpsters

8. Contractor shall provide floor Protection board and plastic installed prior to demolition to protect existing surfaces and to contain dust to the work area as best possible.

P. SCOPE OF WORK:

1. Contractor to use parking spaces for storage and parking as needed at parking lot. No costs for this parking have been included as we assume that the Owner and Landlord of those spaces will be able to come to an agreement.
 - a. Builder shall complete permit applications and make submissions to municipality for all building and mechanical permits required. Standard permits have been included in this agreement for the permit fees.
2. Permit Fees are as assumed below:
MDIA Allowance: \$4,000.00
3. All plans, engineering and design by Barton Ross and Partners, LLC. Pricing and specifications based on plans dated 06/27/2025
 - a. Plan set copies included for permitting, subcontractors and construction

2. SITE WORK:

Q. SITE GRADING:

1. Rough site grading including the repositioning of all excavation soil, shall be done by the Contractor, as directed by the Owner and as indicated in these Documents.
2. Finished grading shall be the responsibility of the Owner or the Owner's Civil Engineer, Landscape Architect or landscape designer.
3. The Contractor shall coordinate with the Owner and/or Civil Engineer to determine where the excavation soil should be placed. Excavation soil which is not needed for fill on this site shall be removed by the Contractor.
4. Refer to drawings for specific information regarding any new decks and retaining walls.

R. FOUNDATIONS:

1. All foundations shall be a minimum of 3'-6" below grade or per local building code and IRC in effect.
2. Where filling is necessary to meet the required slab elevations, the Contractor shall provide a granular fill compacted to the minimum modified AASHO T-180 density of 95%. The grade shall be stripped of all topsoil and deleterious material before applying fill.
3. The tops of all foundations shall be set to accommodate the architectural finishes.
4. It is assumed there are existing footers in sound condition under the building areas of work. See Engineer drawings and plans.

S. LANDSCAPE PLANTING:

1. Removal of existing plants which are to be transplanted shall be the responsibility of the Owner and shall not be a part of this contract.
2. Removal of all existing trees required shall be the responsibility of the Owner.

3. All new landscape planting shall be by the Owner and shall not be a part of this contract.
4. The Contractor shall protect all plants which are to remain with snow fences.
5. The Contractor shall coordinate his work with the Landscape Architect or the Landscape Designer (if any).

T. DRIVEWAY AND CURBING:

1. General Contractor shall be responsible for all new driveway work as shown on the site plan (if any).

U. RETAINING WALLS:

1. All new retaining wall work shall be the responsibility of the General Contractor. Refer to site plan.
2. Retaining walls shall be brick with stone cap (if any).

V. OTHER DRAINAGE AND SITEWORK:

1. Refer to the Civil Engineer's or Site Surveyor drawings for scope of work. All drainage, grading, and site work shall comply with the latest Capitol Heights, Prince Georges County, Maryland regulations.
2. Contractor shall be responsible for all new underground drainage work.
3. Contractor shall comply with the latest requirements of any applicable Stormwater Management Ordinances.
4. Contractor shall arrange for all necessary inspections and permits.
5. Metal half-round gutters (min. 6" with circle clasps every 32" o.c.) and 4" round or corrugated leaders handling the roof areas should slope ¼" per 1'-0" and GC to provide connections to existing French drain or install new continuous drain tile to move water runoff away from foundations.
6. Repair-in-kind all historic built-in gutters at the main roof. Temporary protection and permanent repairs should be performed by a roofer experienced in this specialty on historic buildings.
 - Remove the gutter lining and 2 feet of the roof covering above the curbing of the gutter.
 - Repair rotted or otherwise deteriorated framework. Where rafter ends or lookouts are rotted, install sisters (new rafter ends adjacent to old ones) or scarf in new wood.
 - Replace the old wooden gutter bottom pan with a sustainable wood material, such as cedar or kiln dried-after-treatment (KDAT) plywood. KDAT is treated for resistance to decay, minimal expansion and contraction, and increased longevity.
 - Install the gutter lining: an elastomeric ice-and-water shield on the bottom (not always required); building felt; a slip-sheet of rosin paper; and sheet metal on top (16 or 20 ounce, depending on the dimensions of the gutter).
 - Install the roof covering on the roof deck above the gutter. This includes 2 feet of elastomeric ice-and-water shield (or metal flashing) beneath.
 - Repair or replace-in-kind any cornice moldings, brackets and other architectural woodwork.

3. CONCRETE:

W. CONCRETE:

1. All concrete work shall conform to the latest ACI "Building Code Requirements for Reinforced Concrete, ACI318."
2. Concrete shall be in accordance with the following:
 - Minimum 28-day strength - 3,000 PSI for slabs; 3,500 PSI for footings.
 - Aggregate - Stone, ¾" Maximum.

- Cement - Type 1, 500 lbs./cu. yd.
 - Maximum Slump - 3" to 4".
3. All concrete which is exposed to the weather shall be air entrained. The air entraining admixture shall be at the manufacturer's prescribed rate to result in concrete which has an air content of 5% to 7%. The air entraining admixture shall conform to ASTM C260.
 4. A chloride-free accelerating admixture shall be used in all concrete which is placed at temperatures below 50°F. The admixture shall conform to ASTM C494.
 5. For temperature below 40°F, concrete work shall be protected by wind breaks, curing compounds, and blanket covers in order to maintain the concrete in-place at temperatures of at least 50°F for five days.
 6. The Contractor shall consolidate the placed concrete with mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping.
 7. Concrete to be re-poured where the existing concrete is cut to install new plumbing drains Vapor barrier installed under all new concrete and pins drilled into cut of existing slab to prevent sagging.

W1. REINFORCING:

1. All reinforcing steel shall be intermediate grade, new billet steel, deformed bars conforming to ASTM A615, Grade 60. All bars shall be free of debris and rust, and securely wired in place so that reinforcing will not be displaced by formwork construction, or by concrete placement operations.
2. All welded wire fabric (W.W.F.) shall conform to ASTM A185.
3. The minimum concrete cover for reinforcing shall be 3" for footings, and 3/4" for walls and slabs which are not exposed to the weather.

4. MASONRY:

X. CONCRETE MASONRY UNITS:

1. Hollow load bearing concrete masonry units shall be type N-1 normal weight concrete units ASTM C-90.
2. All concrete masonry units shall have Dur-O-Wal reinforcing in every alternate course except where otherwise noted.
3. The top two courses of concrete masonry units of the foundation wall shall be filled solid.

Y. BRICK:

1. All brick selections shall be approved by Owner and Architect.
2. All new exterior brick walls and sidewalks shall match the existing brick in materials, appearance, window head and sill details, sizes, thickness, pattern and coursing.
3. New mortar joints shall match the existing mortar joints. Contractor shall make every attempt possible to match the mortar in color and consistency. See Cleaning and Repointing specifications at the end of this document.
4. Special care shall be taken to salvage existing brick and brick sidewalk for reuse.

Z. BLUESTONE:

1. All bluestone selections shall be approved by Owner and Architect (if any).
2. All bluestone treads and outside edges of bluestone landings to be solid 2" bluestone (if any).

5. METALS:

A. STEEL REINFORCING BARS: shall be as indicated in Division 3 - Concrete and as shown on the drawings.

B. STRUCTURAL STEEL:

1. All structural steel work shall be fabricated and erected in accordance with the AISC specifications, 1980 edition.
2. All structural steel shall be new, clean and straight and shall conform to ASTM specifications A36 for all steel shapes unless otherwise noted. All steel pipes shall conform to ASTM A501, $F_y=36$ KSI.
3. All high strength bolts shall be friction type conforming to ASTM specifications A325 and shall be provided with hardened washers under the turned element (nut or bolt head).
4. Installation and tightening of all high strength bolts shall conform to the specifications for structural joints using ASTM A325 bolts calibrated wrench method.
5. All welding shall conform to the American Welding Society Code for ARC and gas welding in building construction. Electrodes shall be E70LH.
6. All structural steel shall have a shop primer (red lead iron oxide) or similar, conforming to SSPC paint 2-64.
7. All columns shall be milled to bear at base plates.
8. All anchor bolts shall conform to ASTM A307.

C. MISCELLANEOUS METAL ITEMS:

1. Contractor shall supply and install all necessary miscellaneous metal items not specifically called for on the drawings or mentioned in these specifications.
2. Items shall include but not be limited to: nails, screws, bolts, anchors, base plates, joist hangers, reinforcing material, etc.

6. WOOD AND PLASTICS:

A. ROUGH AND FINISHED CARPENTRY:

1. Stress- grade lumber shall be Douglas Fir (No. 1/ No. 2) or approved equal with the minimum allowable stress as follows:
 - Stress in extreme fiber in bending $F_b = 850$ PSI
 - Horizontal shear $F_v = 95$ PSI
 - Compression perpendicular to grain $F_c = 625$ PSI
 - Compression parallel to grain $F_c = 1,400$ PSI
 - Modulus of elasticity $E = 1,600,000$ PSI
2. Parallam (PSI) beams and headers shall be made from long, thin strands of wood structurally bonded together in patented microwave process by Truss Joist Corporation or approved equal.

Parallam should have minimum allowable stresses as follows:

- Stress in extreme fiber in bending $F_b = 2,900$ PSI
 - Tension parallel to grain $F_t = 1,800$ PSI
 - Horizontal shear $F_v = 290$ PSI
 - Compression perpendicular to grain $F_c = 650$ PSI
 - Compression parallel to grain $F_c = 2,900$ PSI
 - Modulus of elasticity $E = 2,000,000$ PSI
3. Microlam laminated veneer lumber shall be manufactured from thin sheets of veneer structurally bonded together by Truss Joist Corporation or equal to make beams and headers. They shall have allowable unit stresses as follows:
- Stress in extreme fiber in bending $F_b = 2,600$ PSI
 - Tension parallel to grain $F_t = 1,800$ PSI
 - Horizontal shear $F_v = 285$ PSI
 - Compression perpendicular to grain $F_c = 750$ PSI
 - Compression parallel to grain $F_c = 2,310$ PSI
 - Modulus of elasticity $E = 1,900,000$ PSI
4. The framing members at the sides of all door and window openings shall be doubled.
5. Connectors:
- Simpson joist hangers shall be used at all flush connections of joists to beam unless noted otherwise on drawings. Refer to drawings for specific model numbers.
 - The lumber and its fastenings shall conform to the "National Design Specifications for Stress Grade Lumber and Its Fastenings" by the National Lumber Manufacturers Association.
6. Plywood sheathing (if needed) shall be provided and installed as follows:
- Floors – $3/4$ " APA "Sturd-I-Floor 24-23/32".
 - Roofs – $5/8$ " Exterior APA 48/24.
 - Walls – $1/2$ " exterior APA 32/16.
7. Pressure treated lumber or decay resistant heartwood of redwood, or cedar shall be used at all areas where wood members are in contact with masonry or with the ground or wood siding, sheathing and wall framing on the exterior of a building have less than 6" of clearance from the ground. Pressure treated lumber shall be arsenic-free and chromium-free pressure treated wood by the ACQ Preserve brand name produced in accordance with ACQ Preserve Standard ACQ-94 or approved equal. Verify anchor bolt requirements. All connectors shall be approved for use with the pressure treated lumber that they are used with.
8. Contractor shall be responsible to consult with Owner and receive approval for all engineered lumber substitutions. Refer to Division 1, Substitutions.
9. All lumber and framing materials sized and spaced per approved construction drawings.
- a. All lumber and framing materials sized and spaced per approved construction drawings.
 - b. To correct the remainder of any ups and downs above the roof deck, install 2x4 sleepers and then $5/8$ " plywood on top. This will also make the installation of any new roof panels much easier and cleaner looking.

B. WOOD FINISHES AND WOOD TRIM:

1. Interior wood trim:
- The wood of the interior trim shall be clear heart pine or poplar, unless noted otherwise.

- All new door and window head, jamb, and sill interior trim shall match the existing door and window trim unless otherwise indicated.
 - New wood base shall match the existing base trim, unless otherwise indicated.
 - Contractor shall match the existing interior trim profiles.
 - New crown molding shall match existing unless otherwise noted.
 - The interior trim shall be painted by the Contractor, as directed by the Owner.
 - Refer to drawings for specific interior trim details – chair rail, wainscot, etc.
 - Final trim selections shall be determined by Owner. Bid shall assume interior trim details appropriate for this type of house.
 - Samples of all wood trim shall be submitted to the Owner and the Architect for review and approval prior to the ordering of the trim for this project.
2. Exterior wood trim:
- All exterior trim shall be clear heart pine or cedar, not finger jointed or pressure-treated, to match the existing. Alternative materials such as XT Trim, a preservative-treated wood produced by Belco Forest Products, or Fiber Reinforced Polymer (FRP) will be considered if field painted by the Contractor. Submit substitutions to Owner.
 - All exterior trim details shall match the existing except where otherwise noted.
 - Refer to exterior elevation and wall section drawings for specific trim details, sizes, and profiles.
 - Provide new soffits, fascias, rakes, corner boards, shutters, casing, etc. as required by the rehabilitation work. All materials and details shall match existing.
 - Existing trim to remain for existing portions of house where possible. Contractor to evaluate existing trim and provide a recommendation for replacement.
 - Any areas of trim in need of repair shall be remedied or replaced.

7. THERMAL AND MOISTURE PROTECTION:

A. METAL ROOFING:

1. The Contractor shall provide and install a new standing seam metal roof or approved equal with a lifetime limited warranty, as per manufacturer's installation instructions. The Contractor shall provide samples to the Owner and Architect for approval prior to construction.
2. The new roof shall have an underlayment of "Ice and Water Shield" applied as per manufacturer's specifications to the new plywood sheathing.
3. Install "Grace Ice and Water Shield" over entire roof surface from the wall line and up the roof slope from all valleys in all directions.
4. The roof shall be properly flashed with copper and sealed at all penetrations and connections to the other materials and to other construction.
5. Refer to drawings and apply special installation requirements for low-pitched roofs.

B. WOOD/LP SIDING:

1. New wood or LP composite siding shall be installed over the new areas to match and align with the existing siding. Contractor to submit sample for Owner and Architect for approval.
2. Existing siding to remain for portions of house where possible. Contractor to evaluate existing wood siding and provide a recommendation for replacement-in-kind.
3. Any areas of siding in need of repair shall be remedied or replaced. Acceptable repair methods include hand scraping loose material followed by sanded wood putty or West System Epoxy, with Sherwin Williams PrimeRx® Peel Bonding Primer.

4. New siding shall be premium No.1 western red cedar or LP composite clapboards or shingles according to the drawings. Match existing species, thickness, width and exposure to the weather.
5. Owner to approve siding selection from **actual** samples.
6. The Contractor shall provide Tytar or No. 15 felt or equal beneath the new / replacement siding.
7. All wood trim (soffits, fascias, rakes, corner boards, casings, etc.) shall be 5/4 clear pine or cedar to match the existing species and details unless shown otherwise.

C. FLASHING:

1. Flashing shall be used at intersections of roof planes, at connections of roofs and walls, at new roof eaves, and where indicated on the drawings.
2. All exposed and hidden flashing shall be metal to match existing.
3. Re-flash and counterflash existing chimneys and all other existing roof penetrations.
4. Refer to drawings and details for specific information regarding flashing at chimney, dormers, other new roof penetrations, etc.

D. CAULKING AND SEALING:

1. All caulking and sealing shall be done in accordance with the manufacturer's specifications. All joints which are to be caulked or sealed shall be thoroughly cleaned before the work commences. The Contractor shall prime all joints when required by the manufacturer's written instructions.
2. Caulking shall be #707 as manufactured by PTI or BC-158 as manufactured by Pecora.
3. Joints which are to be caulked and/or sealed shall include, but not be limited to, the following exterior joints: between dissimilar materials; around window and door frames; at the meetings of walls, floors and roofs; under saddles and sills; around all utility penetrations; at gutters and leaders (and at the connections of the siding and the roof and window trim).
4. The following interior joints shall also be caulked or sealed: at connections of wall surfaces and all exposed piping, around all utility and plumbing penetrations, at connections of countertops and walls, and where noted.

E. INSULATION:

1. Because many existing walls are not available for inspection, the insulation specified below should be used as the basis of design only. Owner or Contractor can submit to Architect or engineer for substitutions as more information is uncovered during selective demolition. For new walls, as well as in between floor joists in the basement and crawl spaces where accessible, the Contractor shall provide and install glass fiber insulation batts with kraft facing on the heated side, or Equal, as shown in the Documents.
2. Insulation shall be installed in the following thicknesses:
 - In 2 x 4 exterior walls (if shown): 3-1/2" (R-15).
 - In 2 x 6 exterior walls (if shown): 5 1/2" (R-21).
 - In roof and flat ceiling areas: 9" cavity (R-38).
 - In roof and flat ceiling areas: 11" cavity (R-49 high density)
 - In floors above garages and crawlspaces: (R-30 high density).
 - In furred-out walls in basement (if shown): 3-1/2" (R-15).

- Provide Styrofoam baffles at cathedral, tray or flat roofed areas to allow adequate air circulation.
3. Insulation for sound shall be installed in any new bathroom and powder room walls as well as in all framing bays (horizontal and vertical) containing plumbing waste pipes or water supply pipes.
 4. All new interior partitions and ceilings between habitable floors shall be insulated for sound with sound attenuation batts (no kraft paper).
 5. All floors and walls in new areas shall have sound insulation installed. No insulation to be installed where existing walls, floors, or ceiling finishes are to remain.
 6. For all existing walls, historic lath-and-plaster and other inaccessible wall cavities, including the attic walls, the Contractor shall install blown-in insulation:
 - a. Drill small, symmetrical through holes approximately 1 to 2½ inches wide at the top of each stud space (interior side), and blow in material via a long, flexible hose. Seamlessly seal and plug the holes with matching wall construction, plaster finishes, and paint color, etc. Following installation, the plugs should not be noticeable.
 - b. Tightly pack blown-in insulation to mitigate gravity settlement over time.
 - c. Wear protective gear – dust mask, protective eyewear, gloves, etc. Use work lights for hard to see areas.
 - d. Never stand on joists. Contractor should position two pieces of about two-by-three-foot plywood across the joists to give stable standing area. As work progresses, stand on one piece of plywood as the other piece of plywood is constantly repositioned.
 - e. Box-off electrical boxes and recessed can lights. Insulation should be kept away from recessed can lights because the insulation does not allow the heat generated by the lights to dissipate. Contractor to use scrap plywood or wallboard to build a box around each recessed light, leaving a minimum space of three inches between the light and the box.
 - f. Contractor to follow all manufacturer instructions for installation.
 7. Acceptable manufacturers for fiberglass blown-in insulation include:
 - Owens Corning, Toledo, OH, 419-248-8000, owenscorning.com
 - Johns Manville Corp., Denver, CO, 303-978-2000, jm.com
 8. Acceptable manufacturers for cellulose blown-in insulation include:
 - Applegate Insulation Manufacturing Inc., Webberville, MI, 800-627-7536, applegateinsulation.com
 - Nu-Wool Inc., Jenison, MI, 800-748-0128, nuwool.com
 9. Acceptable manufacturers for mineral wool blown-in insulation include:
 - Delfino Insulation Co., Bohemia, NY, 631-567-45495, delfinoinsulation.com

G. FOUNDATION WATERPROOFING:

1. Provide new 'Tuff-n-dri' with 'Warm-n-dri' foundation board and 'Drain Star Z-Drain' waterproofing system at entire foundation (if required).
2. G.C. shall install per manufacturer's specifications.
3. Refer to drawings for additional information.

8. DOORS, WINDOWS AND HARDWARE:

A. WINDOWS:

1. New Windows and doors to be installed as shown on plans and elevations.
2. All window and door openings prepped before installation and all pans and flashings to be integrated into house wrap. Window sills to be sloped to drain to the exterior. Windows and door openings to have a sill pan with back dam. All flanges set in caulk and taped over.
3. Frames shall be factory pre-finished in standard color. (15-year warranty)
4. Glass shall be insulated, Low E.
5. Windows in hazardous locations to be tempered.
6. The exterior casings, sills and aprons shall match the existing house as shown on the elevations.
7. Confirm any screen and hardware color and finish with Owner prior to ordering.

B. INTERIOR DOORS:

1. New interior doors to be panel vertical doors to match existing style, wood species. Confirm stain or paint finish with Owner. Assume paint grade for bidding.
2. Doors shall be 1-3/4" thick solid core pine or fir unless noted otherwise.
3. Match existing door hardware and hinges if possible, verify with Owner. New door hardware shall be barrier-free accessible and be selected by the Owner. Provide allowance, see chart.
4. Refer to Door Schedule or Architect directly for more information.
5. Interior doors to have heavy duty ball bearing hinges; All new glass to be tempered, single pane; Wood framing and insert panels for fire rating to be installed per details and be painted.

C. OTHER EXTERIOR DOORS:

1. Refer to the Door Schedule or Architect directly for all other exterior doors and related information.
2. Doors shall be 2-1/4" thick solid core mahogany unless noted otherwise.
3. Entry Vestibule: Wood frame doors; Windows and transom units by REEB or similar. Both doors to be 36" x 86" with heavy duty ball bearing hinges; All glass to be tempered, single pane; Wood framing and panels for areas below windows and between windows/doors - All wood panel and frames to be painted
4. Entry Door: Custom Mahogany double doors with Full Divided Light grille pattern as shown on Door Schedule. Double top transoms to be Schott, Amiran, 7/8" insulated anti-reflective glass.

D. HARDWARE:

1. The Contractor shall provide all hinges, locks and other necessary barrier-free door hardware.
2. The exterior doors shall have barrier-free hardware and finish selected by the Owner.
3. The Contractor shall provide catalog cuts of the new hardware for the review and approval of the Owner prior to the purchase of the hardware.
4. The Contractor shall provide an allowance for each interior door (latch and hinges) as indicated in the allowance chart.

5. The Contractor shall provide an allowance for other exterior door hardware as indicated in the allowance chart.
6. The Contractor shall coordinate with owner for any hardware that should be salvaged for re-use. This includes the knobs, locksets, and hinges.
7. General Contractor to then re-install all the old hardware as well as all the new hardware. All doors throughout the house shall receive new pairs of hinges.
8. New hardware shall match or approximate the old hardware. Architect to make final selection.

E. STAIRS:

1. Wood stairs as shown in plans with guardrails and handrails included.
2. Stair treads to be covered with heart pine treads.
3. Handrail and Guard rail top cap to be walnut to match or reuse existing.
4. Shop painting of metal stairs, rails and balusters; Owner to make a final selection of color.

9. FINISHES:

A. MATERIALS AND LOCATIONS:

1. Contractor shall refer to room notes in drawings or contact Owner directly for floor, wall and ceiling finishes.

B. GYPSUM WALL AND CEILING BOARD:

1. Gypsum wall and ceiling boards shall be 5/8 inch thickness (except for in garage) as manufactured by U.S. Gypsum, with taped edges for Perf-a-Tape joint system with the gypsum board glued and screwed, not nailed.
2. The Contractor shall tape, spackle and sand all joints (spackling and sanding three times), on the new gypsum board ceilings and walls, to provide smooth, clean surfaces which are ready for painting and finishing. Exterior corners shall have metal corner beads and exposed edges shall have "J" mold. No exposed unfinished edges will be permitted.
3. Water-resistant Gypsum board (green board) shall be used at all wet areas. Concrete composition board shall be used at all tiled wall areas. Blue board shall be used in all areas to receive plaster skim coat.

C. PLASTER: (if required)

1. It may be necessary to patch an affected surface with real plaster. General Contractor shall take this into consideration when Bidding and plan accordingly.
2. Refer to drawings for areas of new wood lath & plaster.
3. All plaster walls and ceilings in the new and renovated areas shall match the existing finish and texture.
4. Gypsum plaster shall comply with ASTM C-28.
5. Gypsum lath shall comply with ASTM C-37. All lathing accessories and fasteners shall be as recommended by the manufacturer of the lath.

6. All sand for plaster shall be clean and well graded from coarse to fine and shall conform to ASTM C-144. Lime for plaster shall be dry hydrated lime conforming with ASTM C-206. All water for plaster shall be clean and free from deleterious amounts of acid, alkali, organic materials, etc.
7. Plaster shall be installed by an experienced, qualified installer.
8. Owner and Architect to approve sample.

D. PAINTING AND STAINING:

1. General Contractor shall be responsible for all painting and staining. The new and affected interior areas and entire exterior shall be painted or stained as directed by Owner.
2. All surfaces which are scheduled to be painted or stained shall be thoroughly cleaned and properly prepared.
3. All surfaces of wood, gypsum board, windows, doors, and trim throughout the interior areas of new construction shall be painted or stained as directed by the Owner, unless otherwise specified.
4. All areas which are to be painted shall receive three (3) coats on all surfaces (one prime coat and two finish coats). Painted wood trim shall be sanded between coats of paint.
5. The interior walls shall be painted in a latex paint. All interior wood trim which is to be painted shall be painted in semi-gloss enamel paint.
6. The exterior trim shall be painted or stained as directed by the Owner. All new wood trim shall be primed on all sides after finish cuts are made, prior to installation.
7. Prepare, prime, and apply two finish coats to all specified exterior surfaces. All preparation will consist mostly of stripping and machine sanding where needed on existing exterior surfaces.
8. FRONT WINDOWS ONLY Windows will be re-glazed and made more operational as possible. A slow dry oil-based primer-sealer will be applied prior to re-glazing where needed and two finish coats on all surfaces.
9. All stucco or brick to be painted will be coated with a self-cleaning masonry paint. (In window openings being filled in) All new trims to be prepared, primed as needed, and receive two finish coats. Includes stripping paint from front masonry including windowsills and base detail.
10. All the new interior areas of the house shall be painted: walls, ceilings, trim, doors, etc.
11. The Contractor shall provide samples of the interior paint colors for the review and approval of the Owner prior to any painting.
12. All areas of finished work are to be protected and cleaned.
13. Paint colors for the interior are to be selected by the Owner from the Benjamin Moore catalog, Sherwin Williams catalog, or approved equal, and provided and applied by the Contractor.
14. Paint to be delivered to site in new, unopened containers. Unused portions of opened paint containers shall be left on site for Owner's use.
15. Provide a separate price for all painting and staining work.

16. Contractor to refer to lead report. Assume there is the presence of lead in existing paint. The contractor or contractor's painter is responsible for following all state regulations regarding removal of lead paint. Any company offering to perform lead hazard evaluation or abatement in Maryland must be certified.
 - a. Contractor to wet scrape and paint stabilize all interior building components consisting of the following;
 - All wood, plaster, exposed brick and wainscot walls (with limited plaster repairs).
 - All plaster, wood & soffit ceilings (with limited plaster repairs).
 - All base trim, doors, door trim, transoms, windows, window trim, baseboards, crown moldings, and chair rails.
 - All previously painted flooring, stair components, support beams, columns, radiators, and existing pipes (if to remain).
 - b. Wet scrape and paint stabilize all exterior building components consisting of the following;
 - All wood siding and clapboards.
 - Front stoop floorboards, treads, railings, etc.
 - All wooden soffits, fascia, exterior trim, windows, doors, dormers, and any other historic wood details.
 - c. HEPA Vacuum and final clean of all work containment areas.

E. TILE, SLABS & COUNTERTOP WORK:

1. The Contractor shall submit tile samples for the Owner's approval prior to ordering any tile.
2. The Contractor shall prepare substrates to receive tile where indicated on the drawings.
3. The Contractor shall install the tile in accordance with the recommendations and specifications of the 'Tile Council of America, Inc.'
4. The tile shall be selected by the Owner and purchased and installed by the General Contractor.
5. The Owner shall approve the grout color prior to installation.
6. All floor tiles shall be mud set where the area to receive the tile can be depressed 1-1/2" below adjacent finish floor levels. All other tile shall be thin set.

F. TILE ALLOWANCES:

1. Bathrooms
 - Porcelain Floor Allow \$15 / sq. ft. material cost
 - Door saddles Tile
2. Includes- Schluter Ditra Underlayment; All setting mud/thinset for tile laying.
3. Grout in color TBD by Owner.

G. CARPET:

1. Any carpet tile and required padding shall be provided and installed by others.
2. General Contractor shall be responsible for the removal of all unwanted existing carpet including padding, tack strips, staples, etc. in areas scheduled for demolition.
3. Existing carpet should not be removed until absolutely necessary to protect the existing floors.
4. General Contractor shall be responsible for protecting existing carpet that Owner wishes to retain.

H. HARDWOOD FLOORING:

1. All existing hardwood flooring as indicated on the drawings or noted in these specifications shall be refinished.
2. New hardwood flooring as noted on plans in, in addition to minor patching, shall match existing. Confirm wood species with Owner and Architect prior to ordering.
3. The new flooring shall be sanded, stained and sealed by the Contractor. The stain color shall be selected by the Owner and Architect. The floor shall receive a minimum of three coats of sealant.
4. The length of each board shall be no less than 2 feet with an average length of 6 feet.
5. Where flooring is indicated to be patched the new flooring shall be feathered in to match the existing.
6. All existing hardwood flooring as indicated on the drawings or noted in these specifications shall be refinished.
7. Historic flooring has separate specifications. Refer to drawing notes and Architect's instructions.

I. CLEANING, SEALING AND FINISHING WOOD:

1. General: The Contractor shall comply with the quality standard for finishing as described below. Repair, removal and replacement of wood elements shall be completed before finishing and sealing, including stripping, sanding and joining of adjacent wood elements. All faces shall be finished: all outside and inside edges, coves, and rounded surfaces.
2. Wood Cleaning: Prepare and dry treated surfaces as per manufacturer's directions. Initiate cleaning of any paint, stain, etc. with a water-soluble paint remover. Carefully clean boards with a caustic cleaner such as "double x cleaner" manufactured by Schalk Mfgs., 2400 Vaux Hall Rd., Union, NJ 07083. If a water-soluble paint remover is found to be ineffective, acceptable alternatives for cleaning include products containing benzyl alcohol, dimethyl glutarate, and dimethyl adipate. Products containing methylene chloride are prohibited.
 - a. Cleaning is to be done with bristle brushes and semi-rigid scrapers only; no wire brushes or metal scrapers are allowed. Buff with steel wool pads and hand scrape as necessary to obtain smooth, clean surfaces. Mechanical sanders are not allowed.
3. Wood Sealing: Seal wood with a liberal coat of boiled linseed oil and let dry completely 3-10 days, depending on weather, humidity, etc.
4. Wood Finishing and Final Seal: Apply a second coat of boiled linseed oil to which a small amount of coloring has been added as required to obtain a uniform appearance (do not put coloring into first coat). allow wood to air dry completely. Apply light coat of wax to seal.
5. Any new hardwood flooring shall match existing T&G flooring. Confirm wood species with Owner and Architect prior to ordering. Allow \$15 / sq. ft. material cost
6. The new flooring shall be sanded, stained and sealed by the Contractor. The stain color shall be selected by the Owner and Architect. The floor shall receive a minimum of three coats of sealant.
7. Where flooring is required to be patched the new flooring shall be feathered in to match the existing.
8. All existing and historic hardwood flooring as indicated on the drawings or noted in these specifications shall be refinished-in-kind using instructions above.

10. SPECIALTIES:

A. PANELING, CABINETS AND BUILT-IN SHELVING:

1. Unless otherwise noted the Contractor shall provide and install:
 - All wood wall and ceiling paneling per the Architect's drawings
2. All cabinetry shall be selected by Owner and installed by General Contractor unless noted otherwise.
3. Refer to the interior elevations for the design of the new wood paneling.
4. The Contractor shall be responsible for all templating, purchasing, installation, finishing, and hardware.
5. Refer to Allowance Chart for more information.

11. EQUIPMENT:

A. APPLIANCES:

1. General Contractor shall install the following appliances selected by Owner:
 - None at this time
2. Contractor shall be responsible for all connections and venting per manufacturer specifications.

12. FURNISHINGS: All furnishings supplied by others.

13. SPECIAL CONSTRUCTION: No work proposed.

14. CONVEYING SYSTEMS: No work proposed.

15. MECHANICAL:

A. PLUMBING:

1. All work shall be in accordance with the Uniform Construction Code, latest edition of the International Building Code, the latest edition of the National Standard Plumbing Code 2009 and the International Mechanical Code 2003 and all other applicable codes and regulations and best trade practice. PVC Drainage piping per code. CPVC Water Piping Per code.
2. The Contractor shall furnish and install all necessary work as indicated, including all items that are not specifically shown but which are required for a complete job.
3. The Contractor shall provide and install the plumbing fixtures, which shall be selected by the Owner. The Contractor shall provide an allowance figure for the purchase of the fixtures and associated faucets, handles and other hardware.
4. All new water piping in exterior walls shall be insulated and positioned close to interior surfaces.
5. All existing plumbing lines, which are to be removed, shall be carefully and properly capped below the floor level.

6. Cuts into wood structural members for the installation of plumbing piping shall be through the centers of the wood members and shall not be closer than 2-1/2" to the top or bottom of horizontal wood structural members (such as beams or joists).
7. Plumbing system consists of new bathrooms, mop sink and utility sink as shown on the plans.
 - a. Install new plumbing system to service two new ADA bathrooms, 2nd floor kitchen, and janitors closet as shown on drawings provided. Demo existing bathrooms to allow for remodel to begin.
8. Install all underground rough plumbing and above grade rough plumbing.
9. Install all plumbing fixtures and make all final connections. Install new main water supply from front of building through chase with new shut off valve.
10. Provide one new frost-free exterior hose bibb. Hose bibb to have hot and cold-water connections. Locate at front of building near water supply to building.
11. Contractor to investigate existing hot water heater for adequacy and capacity. Install new 30-gallon electric water heater to service bathrooms.
12. Provide new 3/4 inch water supply lines and new sanitary waste lines for all new bathrooms from the basement or crawl space in a neat, and orderly layout.
13. All new supply piping shall be copper, or flexible PEX piping if approved by Owner.
14. All new waste piping shall be cast-iron, or PVC piping if approved by Owner.
15. Provide shut-off valves for all fixture groups and label each valve.
16. Contractor shall be responsible for any gas piping for new mechanical equipment.
17. Contractor shall be responsible for all connections to air handlers and outdoor condensers including condensate lines and drains.

B. HEATING, VENTILATING AND AIR CONDITIONING:

1. The HVAC system shall meet the following criteria: 70 degrees inside temperature at an outside temperature of 10 degrees and wind velocity of 15 MPH in the winter; 78 degrees inside temperature at 90 degrees dry bulb outside in summer with a wet bulb temperature of 76 degrees. The exact BTU requirements shall be determined by the HVAC Subcontractor.
2. HVAC Subcontractor shall provide written calculations with recommendations regarding the proposed extended system as part of the bid.
3. Owner, Architect, and Subcontractor shall 'walk-through' the project with the Owner, the general contractor, and the HVAC subcontractor to locate ducts, supplies, returns, thermostats, etc., prior to roughing or fabrication of the ductwork.
4. The locations of pipes, ducts, diffusers, thermostats, etc., and their models and sizes shall be as recommended by the Contractor and as approved by the Owner and the Architect, prior to the ordering, fabrication or installation of any HVAC work. The Contractor shall notify the Owner and the Architect prior to installation if this criterion cannot be achieved and maintained.

5. Provide electronic air cleaners on all new air handlers. Units to be manufactured by 'Honeywell' or approved equal.
6. Provide humidification on all new air handlers to add moisture to the air.
7. Both the heating and cooling systems shall be balanced to the Owner's satisfaction. Test runs shall be performed for both modes.
8. All ductwork and registers shall be thoroughly cleaned prior to the conclusion of the project.
9. HVAC Subcontractor shall return to the job site at the next change of season following the completion of the project to make adjustments, check the system, etc.
10. All bath fans to be vented to the exterior
11. All ducting to be done with hard pipe where accessible. Only flex where needed
12. Exterior Vent Hoods to have a damper to prevent air leakage
13. Proposed HVAC System (by design/build contractor): Sheet metal ductwork in a trunk and branch style system. The trunk should be a mixture of rectangular & round 24-26 gauge. The spiral system should be single-wall spiral with deflection registers. Spiral is paintable with a primer & paint mix. Installation does not include cleaning of the ductwork to prep for any paint and/ or site protection. The return side will be installed in rectangular or round sheet metal ductwork 24g-30g. Ducting may include sheet metal ductwork and flexible ductwork. Ductwork should be insulated to R6 value. Include: Exhaust fans for bathrooms; student workrooms, exterior furnishings for ventilation exhaust, bath exhaust, and kitchen exhaust.
 - a. Warranty: Provide a 1-year labor warranty for all ductwork and equipment installed by HVAC contractor.

16. ELECTRICAL:

A. GENERAL:

1. All work shall be in accordance with the "National Electrical Code, 2018" the subcode of Maryland and all other applicable codes and regulations.
2. The Contractor shall furnish and install all work as indicated, including all items that are not specifically shown but which are required for a complete job. Install electrical rough-ins per plans.
3. Contractor to provide all surface mounted decorative lighting fixtures per Architect.
4. Additional or substituted fixtures shall be submitted to the Owner and Architect for review and approval.
5. All electrical lines, outlets and fixtures which are scheduled for removal shall be terminated in a safe and proper manner.
6. Provide additional circuits as required. Provide separate circuits for kitchen, appliances, whirlpool tub, equipment, etc. as required. Provide ground-fault circuits where required.
7. Provide separate circuits for sewage ejector pump, sump pump, and any other equipment as necessary or as shown on the drawings.

8. The Contractor shall verify the requirements of all HVAC equipment and of all appliances with the Owner, and shall provide for all special electrical requirements.
9. Contractor shall verify switch plate types and color with Owner. Provide dimmer switches with on / off buttons for all renovated space.
10. Contractor shall be responsible for all electrical connections in the kitchenette including venting of the appliances.
11. Verify that the existing service is sufficient for the additional electrical requirements of the additions and renovations. Bid to indicate what is being provided.
12. Provide and install new hard-wired, interconnected smoke detector and carbon monoxide alarms with battery back-ups. Refer to the drawings for quantity and locations.
13. Telephone wiring/Television cabling by the General Contractor, if required.
14. Computer wiring and network cabling by General Contractor. See electrical plans. Data Wiring will depend on the number of outlets required, hub location and the Owner's preferences.
15. Security system provided and installed by Atlantic Security. General Contractor shall coordinate his work with the Security Contractor. Check with Owner.
16. ELECTRIC: Propose to reuse the existing service and CT cabinet located on the rear of the building.
17. CABLE, PHONE, INTERNET PROVIDER: Existing service lines to building to be reused.
18. WATER SERVICE Existing water line to be replaced from the exiting shutoff inside the building and run-in new piping to rear of building. Refer to Engineer drawings and plans.
19. SEWER If required, all drain lines inside the building to be replaced under the concrete slab and tied into existing connection that exits the building. Refer to Engineer drawings and plans.

17. GENERAL NOTES:

A. GENERAL:

1. All Work is to conform to all applicable requirements of all governing local, state and federal Codes, Laws, Regulations and best trade practices.
2. The Contractor shall give all notices, obtain all permits, licenses, certificates of inspection, of approval, of occupancy and other such instruments required for his work, and pay all costs and fees for them. The Contractor shall make all necessary arrangements for the connections of utilities and pay the charges for them.
3. Except as otherwise noted, the Contractor shall guarantee all work against defects for one (1) year from the date of substantial completion. The necessary repairs or changes shall include correcting any defective or inferior work and correcting all damage to property caused by such work or by correcting it.
4. All dimensions and conditions shown and assumed on the Documents must be verified at the site by the Contractor before ordering any material or doing any work. Any discrepancies or errors in the Documents must be reported to the Architect at once. No change in plans, details or dimensions is permissible without the consent of the Owner and Architect.

5. Minor details not usually shown or specified but necessary for proper and acceptable construction, installation, or operation of any part of the Work, as determined by the Owner and Architect, standards of good workmanship and best trade practices, shall be included in the Work the same as if herein specified or indicated.
6. The Contractor shall be responsible for protection of all existing and new conditions and materials within and adjacent to the construction area. The Contractor shall keep the work site free from debris and accumulated refuse, and shall have sole responsibility for protecting all dangerous areas from entry by unauthorized parties.
7. The Contractor shall lay out his work and be solely responsible for its correctness and safety, and shall give necessary dimensions and directions to all parties.
8. Substitution of equipment or materials other than those shown in the Documents shall be made only upon the approval of the Architect and Owner.
9. Upon completion of the Work, the entire project is to be completely cleaned and the site restored to existing condition including, but not limited to, the following:
 - Complete sweeping of all areas, and the removal of all rubbish and debris.
10. Removal of all stains and paint from glass, hardware, finished flooring, cabinets, etc.
 - Restoration of property by filling of all ruts with raked topsoil and making repairs to damaged asphalt paving.
11. The Contractor shall patch all areas which are affected by the construction to match the existing or new adjacent materials and surfaces.

CLEANING HISTORIC BRICKWORK

Improper cleaning can cause irreparable damage to historic brickwork. Therefore, a restoration specialist should always oversee the cleaning of structures with historic significance. It is imperative to use the least harmful cleaning method that will achieve the desired results.

Cleaning methods and materials must be carefully matched to the substance to be cleaned, the type of soiling/staining to be removed, and the desired aesthetic appearance.

Testing of cleaning procedures and chemicals is strongly recommended before the work begins. Such testing should be performed in a controlled environment that closely approximates the temperature and humidity conditions under which the brick masonry will be treated. Cleaning solutions recommended by the brick or cleaning agent manufacturer should be trial tested before being committed to an entire project. If cleaning will permanently damage the building, cleaning should not be considered.

SUMMARY OF RECOMMENDATIONS:

Abrasive or Sand Blasting is NOT Allowed:

- Do not use abrasive blasting on historic brick or brick with a decorative surface coating.

For All Cleaning Methods:

- Scaffold front of building as required, obtaining the proper permits;
- Carefully cover existing windows to protect from paint removal;

- Clean masonry when the temperature remains a constant 45 degrees F or above for a 72 hour period from the commencement of work;
- Select the gentlest effective cleaning method;
- Follow the brick manufacturer's recommended cleaning procedure;
- Do not use unbuffered muriatic acid;
- Do not use power saws or tools – only traditional hand tools are permitted when working with historic brick;
- Clean new masonry as soon as possible after mortar hardens, typically 7 days. More aggressive cleaning methods may require a longer mortar curing time prior to cleaning;
- Clean from the top of the wall section to the bottom;
- For consistent results, do not overlap areas being cleaned;
- Contractor to ensure neighboring properties are protected from debris or damage from any ongoing work.

Prior to Cleaning:

- Match the cleaning method and cleaning solution to the type of brick;
- Protect adjacent materials that may be damaged by cleaning;
- Remove large mortar tags using wooden paddles or non-metallic tools;
- Test the cleaning method and materials on a 20 ft² (2 m²) sample area and allow wall to dry before evaluation;
- Determine the environmental impact and appropriate removal method of cleaning effluent.

Bucket and Brush Cleaning:

- Saturate the area to be cleaned and brickwork below with water prior to applying cleaning solution and keep wet until final rinse;
- Mix and apply cleaning solution according to manufacturer's instructions;
- Do not allow cleaning solution to dry on brickwork;
- After cleaning, thoroughly rinse the area being cleaned and the area below with water.

Pressurized Water Cleaning:

- Determine appropriate water pressure, nozzle type and distance between wall and nozzle by trial cleaning, maintain consistently throughout cleaning;
- Saturate the area to be cleaned and brickwork below with water prior to applying cleaning solution, and keep wet until final rinse;
- Apply cleaning solution according to manufacturer's instructions with a low-pressure sprayer, 30 to 50 psi (200 to 350 kPa) using a 50-degree fan-shaped sprayer, or by brush;
- Do not use high pressure to apply cleaning solution;
- Do not allow cleaning solution to dry on brickwork;
- Thoroughly rinse using a maximum water pressure of 200 to 300 psi (1,400 to 2,100 kPa) with a 25-degree to 50-degree fan-shaped tip.

Efflorescence Control:

- Allow one year of weathering to naturally remove new building bloom;
- Remove light efflorescence by dry brushing or with a stiff fiber brush and water;
- Before attempting to clean recurring efflorescence, identify and correct the source of water penetration and allow the brickwork to dry;
- Remove stubborn accumulations with a proprietary cleaner according to the manufacturer's instructions.

REPAIRING HISTORIC MASONRY

The deterioration process of brick can be similar to that of stone, in which successive layers flake off. In cases where the brick is exposed to constant soaking moisture, it can disintegrate into powder. This process is accelerated when bricks have had their hard, outer surface destroyed through abrasion, such as sandblasting.

There is no real way of repairing brick short of replacement. The damaged brick must be chipped out, along with the surrounding mortar, and a new brick or bricks inserted and pointed. It is essential when replacing brick to use an exact match in size, color and texture. If the existing bricks are only damaged on their exterior face, it is sometimes possible in small areas, to remove the brick intact and re-install it in reverse with the rear face exposed. Besides solving the problems of matching, this method is desirable because it preserves the original materials of the building.

If the existing bricks cannot be used, then new bricks that match the original as closely as possible in terms of size, color and texture should be used. Care should be taken to match the size, tooling and color of the mortar joints, and the pattern of the brick bond as well.

SUMMARY OF RECOMMENDATIONS:

Identify the Problem Before Repointing:

The decision to repoint is most often related to some obvious sign of deterioration, such as disintegrating mortar, cracks in the mortar joints, loose bricks or stones, damp walls, or damaged plasterwork. The root cause of the deteriorations (leaking roofs or gutters, differential settlement of the building, capillary action causing rising damp, or extreme weather exposure) should always be dealt with prior to beginning work. Without appropriate repairs to eliminate the source of the problem, mortar deterioration will continue and any repointing will have been a waste of time and money.

Find an Appropriate Mortar Match

Analysis of unweathered portions of the historic mortar to which the new mortar will be matched can suggest appropriate mixes for the repointing mortar so that it will not damage the building because it is excessively strong or vapor impermeable. A simple, non-technical, evaluation of the masonry units and mortar can provide information concerning the relative strength and permeability of each, while a visual analysis of the historic mortar can provide the information necessary for the developing the new mortar mix and application techniques. Mortar analysis by qualified laboratory can be useful by providing detailed information on the original material ingredients.

In creating a repointing mortar that is compatible with the masonry units, the objective is to achieve one that matches the historic mortar as closely as possible, so that the new material can co-exist with the old in a sympathetic, supportive and, if necessary, sacrificial capacity. The exact physical and chemical properties of the historic mortar are not of major significance as long as the new mortar conforms to the following criteria:

- The new mortar must match the historic mortar in color, texture and tooling;
- The sand must match the sand in the historic mortar. The color and texture of the new mortar will usually fall into place if the sand is matched successfully;
- The new mortar must have greater vapor permeability and be softer (measured in compressive strength) than the masonry units;
- The new mortar must be as vapor permeable and as soft or softer (measured in compressive strength) than the historic mortar. (Softness or hardness is not necessarily an indication of permeability: old, hard lime mortars can still retain high permeability.

Properties of Mortar:

Mortars for repointing should be softer or more permeable than the masonry units and no harder or more impermeable than the historic mortar to prevent damage to the masonry units. It is a common error to assume that hardness or high strength is a measure of appropriateness, particularly for lime-based historic mortars. Stresses within a wall caused by expansion, contraction, moisture migration, or settlement must be accommodated in some manner. In a masonry wall these stresses should be relieved by the mortar rather than the masonry units. A mortar that is stronger in compressive strength than the masonry units, will not "give", this causes the stresses to be relieved through the masonry units which results in permanent damage to the masonry, such as cracking and spalling.

Historically, mortar acted as a bedding material, not unlike an expansion joint, rather than a “glue” for the masonry units, and moisture was able to migrate through the mortar joints rather than the masonry units. When moisture evaporates from the masonry it deposits any soluble salts either on the surface as efflorescence or below the surface as subflorescence. While salts deposited on the surface of masonry units are usually relatively harmless, salt crystallization within a masonry unit creates pressure that can cause parts of the outer surface to spall off or delaminate. If the mortar does not permit moisture or moisture vapor to migrate out of the wall and evaporate, the result will be damage to the masonry units.

Mortar Type and Mix:

The actual specification of a particular mortar type should take into consideration all of the factors affecting the life of the building including: current site conditions, present condition of the masonry, function of the new mortar, degree of weather exposure, and skill of the mason. No two repointing projects are ever exactly the same.

Joint Preparation:

Old mortar should be removed to a minimum depth of 2 to 2-1/2 times the width of the joint to ensure an adequate bond and to prevent mortar “popouts”. For most brick joints, this will require removal of the mortar to a depth of approximately 1/2 to 1 inch; for stone masonry with wide joints, this will require removal of the mortar to a depth of several inches. Any loose or disintegrated mortar beyond this minimum depth also should be removed. Small pneumatically-powered chisels generally can be used safely and effectively to remove mortar on historic buildings as long as the masons maintain appropriate control over the equipment. Although mechanical tools may be used safely in limited circumstances to cut out horizontal joints in preparation for repointing, they should never be used on vertical joints because of the danger of slipping and cutting into the brick above or below the vertical joint.

Mortar should be removed cleanly from the masonry units, leaving square corners at the back of the cut. Before filling, the joints should be rinsed with a jet of water to remove all loose particles and dust. At the time of filling, the joints should be damp, but with no standing water present. It is recommended that a continual mist of water be applied for a few hours before repointing begins on masonry walls (limestone, sandstone and common brick) that are extremely soft and absorbent.

Filling the Joints:

Where existing mortar has been removed to a depth of greater than 1 inch, these deeper areas should be filled first, compacting the new mortar in several layers. The back of the entire joint should be filled successively by applying approximately 1/4 inch mortar, packing it well into the back corners. This application may extend along the wall for several feet. Several layers will be needed to fill the joint flush with the outer surface of the masonry. It is important to allow each layer time to harden before the next layer is applied.

If the old bricks or stones have worn, rounded edges, it is best to recess the final mortar slightly from the face of the masonry, the treatment will help avoid a joint which is visually wider than the actual joint; it also will avoid creation of large, thin feathered edges which are easily damaged, thus admitting water. After tooling, excess mortar can be removed from the edge of the joint by brushing with a natural nylon brush. Metal bristle brushes should never be used on historic masonry.

During Restoration or Construction:

- Use traditional brick laying and masonry pointing techniques that reduce mortar smears during construction;
- Use construction practices that prevent debris from splashing onto brickwork and minimize water penetration into unfinished masonry.

For more information, see National Park Service's Preservation Brief No. 1, "Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings," Chapter 2 "Repointing Mortar Joints in Historic Masonry Buildings",

Robert C. Mack, FAIA and John P. Speweik, The Preservation of Historic Architecture (Department of the Interior: The Lyons Press, 2004), and the Brick Industry's "Technical Notes on Brick Construction," no. 20, 1996.

All questions regarding this specification shall be directed toward the Architect.

END SPECIFICATION