

Bid # K-22
ADDENDUM # 1
January 9, 2009

Witch House Roof and Chimney Repair
Salem, MA

The submittal deadline for Bid K-22 has been extended from 10:00 A.M., January 20, 2009, to 10 A.M. Tuesday, February 3.

Revisions to Bid Documents

1. Technical Specifications

It has come to the City's attention that a number of pages were missing from the Technical Specifications issued on December 29, 2008. Bidders are directed to utilize the following updated specifications sections in their bids, attached to Addendum 1:

- Table of Contents - Construction Specifications
- Division 1 - General Requirements
- Section 06250: Carpentry, Framing, and Wood Conservation
- Section 07600: Flashing and Sheet Metal

2. Schedule of Unit Prices

In addition to the General Bid Form, bidders are required to submit the attached Schedule of Unit Prices.

UNIT PRICES

Salem Witch House Roof and Chimney Repair

January 9, 2008

The undersigned agrees to the following:

A. Unit Prices: Unit Prices as defined in this section will be used to determine adjustments to the Contract Amount when changes related to these Unit Prices are made in the work.

B. Measurement and Payment: Prior to beginning any work on a Unit Price basis, the Contractor shall notify the Owner sufficiently in advance to permit measurements to be verified. Only quantities which have been verified and approved by the Owner will be used to determine adjustments to the Contract Amount. Performance of any work not required by the Contract Documents, verified by the Owner, or authorized by signed Change Order shall not be considered for payment under the terms of Unit Prices. The Contractor shall be solely responsible for all unauthorized work.

UNIT PRICES

ITEM UNIT ADD DEDUCT

UNIT PRICE #1: Additions and subtractions to base bid amount of spalled brick replacement per brick (Base bid is 15 individual bricks).

Price per brick: _____

UNIT PRICE #2: Additions and subtractions to base bid amount of wood roof sheathing replacement per square foot (Base bid is 100 square feet).

Price Square Foot: _____

Date: _____

(Name of General Bidder)

By _____

(Print Name as Signed Above)

(Title)

ROOF REPLACEMENT

THE WITCH HOUSE

Salem, Massachusetts

September 15, 2008

Table of Contents - Construction Specifications

Division 1 - General Requirements

Section 01000 - General Requirements	9 Pages
Section 01025 – Unit Prices	1 Pages
Section 01030 – Alternates	2 Pages

Division 4 – Masonry

Section 04520 – Chimney Repointing and Rebuilding	7 Pages
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Division 6– Wood

Section 06250 – Carpentry	9 Pages
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Division 7– Moisture Protection

Section 07300– Wood Shingle Roofing	8 Pages
Section 07600– Flashing and Sheet Metal	7 Pages

Division 9 – Finishes

Section 07900 – Painting	8 Pages
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Drawings

Drawing # A1	Roof Plan & Scope
Drawing # A2	Elevations
Drawing # A3	Flashing Front Gables-1
Drawing # A4	Flashing Front Gables-2
Drawing # A5	Flashing & Rake Details
Drawing # A6	Rear Gutter Details
Drawing # A7	Ridge & Chimney Details
Drawing # A8	Chimney Photographs

SECTION 07600

FLASHING AND SHEET METAL

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the work of this section.
- B. The extent of work is shown on the drawings.

1.02 DESCRIPTION OF THE WORK

- A. Provide all plant, materials, labor and equipment necessary and/or required for the complete execution of the work of this Section including, but not limited to:
 - 1. Provide all lead coated copper (LCC) and lead flashings required for the installation of new wood shingle roofing including, but not limited to:
 - a. Chimney Flashings:
 - i. Provide 16 oz. LCC stepped base flashings at chimney.
 - ii. Provide 4 lb. lead counter flashings and aprons at chimney
 - b. Provide 16 oz. Lead coated copper (LCC) closed valley flashings at gable valleys as indicated on Roof Plan drawing A1 (Refer to drawing 3/A5 for details).
 - c. Provide 16 oz. LCC flashings at roof vents.
 - d. Provide 16 oz. LCC flashings at change in pitch of rear leanto roof and at ridge boards. (Refer to drawings 2/A5 & 1/A8 for details)
 - e. Provide 16 oz. LCC edge strips in conjunction with EPDM flashing installation at the junctions of the front gables with the front entry porch gable.
 - f. Provide 16 oz. LCC stepped flashings at junction of front entry porch shingles to facade clapboards.
 - g. Provide 20 oz. LCC linings to new wood gutter and wood downspouts including

all LCC outlet tubes and leaders as required to connect gutters and downspouts.

2. Provide EPDM membrane flashings at the junctions of the two front gables with the front entry porch gable. (Refer to drawings A3 & A4 for details)

1.03. RELATED WORK SPECIFIED ELSEWHERE

Section 04520 - Chimney Repointing and Rebuilding

Section 06250 - Carpentry and Framing Repairs

Section 07300 - Wood Shingle Roofing

1.04 INTENT

- A. It is the intent of this work to make the roof and roofing drainage system sound and fully watertight, and to effectively remove water from the roof without damaging exterior woodwork below.

1.05 QUALITY ASSURANCE

- A. The work of this Section shall be accomplished by a specialist firm of established reputation for performance of work of the highest quality having not less than five years of successful experience in the installation of copper and lead flashings and gutters on buildings of similar age and type to the Witch House, or, if newly organized, whose personnel have previously established a similar reputation in the same field, and which is regularly engaged in and maintains a regular force of workman skilled in the work of this section.
- B. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.
- C. The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.

1.06 SUBMITTALS

A. Work Plan

1. Submit work plan detailing schedule proposed to accomplish the work including the order in which specific pitches will be worked on, coordination with chimney repairs, protection of entry ways and paths used by the employees and general public using the facility, and provisions to prevent any leaks during work in progress and general protection of work surfaces from inclement weather.

B. Shop Drawings

1. Drawings at 3"=1' showing proposed installation of gutter lining, leaders, and downspout tubes including seams for gutter system and any flashing details proposed that vary from the details on drawings.

C. Samples.

1. Provide 6" x 1' sample of each weight of lead coated copper, copper, aluminum, and lead proposed for use stamped with manufacturer's identification as to gauge.
2. Provide samples of each type of cleat, hardware, fasteners, paints, adhesives, sealants, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.
3. Product Data. Submit manufacturers' technical data and Materials safety Data Sheets for each product specified or proposed for use including recommendations for their application and use.

D. Field Constructed Mock-ups. Prior to the start of production work for the respective items, provide full size mock-ups for each of the items listed in locations designated by the Preservation Consultant. Mock-ups will be used to measure standards of workmanship, finish, texture, material, and detail, and qualifications of workman with regard to requirements set forth in the Contract Documents. Obtain written acceptance of mock-up from Preservation Consultant before proceeding with production work. Repeat mock-up procedure as required until accepted by Preservation Consultant. Protect and mark accepted mock-ups, retain in undisturbed condition during construction to be used as a standard for acceptance of completed work. Unless otherwise indicated accepted mock-ups may be incorporated into production work.

1. Chimney flashings including base and cap flashings including an uphill corner at one of the side pilasters.
2. 2' section of gutter lining installed in gutter.
3. 2' section of copper lining installed in wood downspout including leader from gutter.
4. 3' long section of closed valley installation showing stages of installation and complete with wood shingles installed.
5. 1' wide x 3' high section of shingle and EPDM flashing installation where the front gable valley meets the front entry porch gable valley demonstrating in three distinct stages:

- a. Removal of existing roofing and preparation of existing roof sheathing.
- b. Installation of underlayments, EPDM membrane, and copper edge strips as required to make a watertight path for roof drainage.
- c. Installation of wood shingles of shingles over upper edge of EPDM membrane..

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas.
- B. Protect materials during storage and construction. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Keep all products dry and protected from rain. Comply with manufacturer's recommendations for minimum and maximum temperatures.

1.08 PROJECT CONDITIONS

- A. Environmental requirements.
 1. Do not apply copper or other roofing materials over damp substrates.
- B. Carry out work in limited stages working on one primary pitch or roof area at a time in order to minimize the chance of leaks due to bad weather during the construction process. Insure that each pitch is fully watertight before going on to next pitch.
- C. Protect roof areas as they are exposed by removal of roof finishes and repairs to the substrate from weather and physical damage to the surfaces below. Fully protect by waterproof tarpaulins, plastic sheeting, or roofing felts all areas where roofing materials have been removed to effect work.
- E. Protect Owner, Owner's employees, and the general public using the building and adjacent site from possible injury by construction debris and construction activities.

1.09 GUARANTEE

- A. Provide written warranty ensuring that all roofing materials shall remain sound, fully watertight, and free of cracks and defects, for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2 – PRODUCTS

2.01 FLASHING AND DOWNSPOUT MATERIALS

A. Copper:

1. Lead coated copper for flashings (LCC): ASTM B-101, Class A, cold rolled except where soft temper is required for forming; 16 oz. except as otherwise indicated.
2. Copper for flashings and roofing (Cu.): ASTM B-370, temper H100 (cold rolled) except where soft temper is required for forming; 16 oz. except as otherwise indicated.

B. Lead for chimney cap flashings: 4 lb. Sheet lead ASTM B 749 (available from NELCO, Woburn, MA)

B. Nails for fastening sheet metal to wood: brass or copper, of “stronghold” type, with large flat heads, annular rings, and needle points; not smaller than No. 12 stub gauge and of sufficient length to penetrate the wood sheathing, blocking, and nailers, etc., not less than 7/8” long, but not so long that they penetrate through the underside of the roof boarding.

C. Screws, bolts, and other accessories for fastening sheet metal to wood or other non-ferrous metals shall be round headed brass, silicone bronze, or copper, and shall be equipped with soft neoprene self-sealing washers.

D. Solder: ASTM Specification B-32, composition 50% tin and 50% lead.

E. Flux: Rosin core or acid killed with zinc. All acid is to be completely washed off after completion of soldering.

F. Sealant: low modulus, one part, silicone sealant, No. 795 by Dow Corning Company. Color to match adjacent mortar joints in chimney.

G. Waterproof Membrane: Ice and Water Shield by W.R. Grace and Co., or equal.

H. EPDM Flashing at the junctions of front gables with the front entry porch gable:

- a. .060 fully adhered, cured non-reinforced EPDM membrane roofing system, RubberGard by Firestone or Sure-Seal EPDM by Carlisle,
- b. 1/2” recovery board substrate by the EPDM manufacturer or Structodex by Celotex;
- c. All related materials and fasteners shall be in conformance with the written guide-

lines and recommendations of the EPDM manufacturer.

PART 3 – EXECUTION

3.01 INSPECTION AND ACCEPTANCE

- A. Examine all surfaces and contiguous elements to receive the work of this section and correct, as part of the work of this Contract, any defects affecting installation. Commencement of work will be construed as complete acceptance of surfaces and contiguous elements.

3.02 REFERENCE STANDARDS

- A. Follow guidelines and written specifications of “Sheet Copper Applications” by the Copper Development Association, “Copper and Common Sense” by Revere Copper and Brass Co., Inc., manufacturer’s instructions, and the Cedar Shake and Shingle Bureau, and written guidelines and recommendations of the EPDM manufacturer.

3.03 INSTALLATION , GENERAL

- A. Fabrication: Shop fabricate work to the greatest extent possible.
- B. Expansion: Provide for expansion and thermal movement, and in general use methods of fabrication, fastening, and detail layout to allow for thermal expansion.
- C. Anchor units of work securely by methods indicated; conceal fasteners where possible using 2” wide copper cleats located 12” o.c. or as indicated and nailed with two nails. Do not face nail. Install work with laps, joints, and seams which will be permanently water-tight and weatherproof, and without waves, buckles, or distortion.
- D. Tinning: Pre-tin edges of all plain copper sheets to be soldered for a width of 1 1/2” both sides with solder.
- E. Soldering: Perform slowly with well-heated coppers, so as to heat thoroughly the seam and sweat the solder through the full seam width.

3.04 FLASHING SPECIFICS

- A. Flashing at junctions of shingle roof to clapboard walls: Use 16 oz. base flashings only, which shall consist of separate pieces of copper woven in with each course of shingles. Each piece to extend out on roof 4” and up on wall 4” under clapboards. Extend each piece from top edge of shingle to within 1/2” of butt of overlying shingle. Each piece shall lap the adjoining piece in the direction of flow not less than 3”. Do not puncture flashings with shingle or clapboard nails.

- B. Chimney flashings: base flashings to be similar to 3.04.A. above. Cap flashings shall be 16 oz. and lap base flashings a minimum of 4", and adjoining pieces 3" in direction of flow. Turn top of each piece into reglet in chimney a minimum of 1" with the back turned up 1/4", and secure in joint with lead wedges 8" o. c. Fill reglet with sealant. Base flashings at corners and at pilasters shall be properly formed and soldered so as to be fully watertight.
- C. Closed valley flashings: Use 16 oz. LCC sheets interwoven between each course of shingles positioned with the bottom edge within 1/2" of the butt of the overlaying shingle, a min. lap of 3" with the shingle course below the flashing, extending 2" above shingle under them for nailing and extending a min. of 9" under shingles on each side of the valley. Position nails so as not to penetrate flashing of course below.
- D. Misc. flashings at shingle and metal roofs: Refer to drawing details.

3.05 EPDM FLASHINGS

- A. Installation details and all related materials and fasteners are to conform to the written guidelines and recommendations of the EPDM manufacturer. Contractor shall provide cut sheets of all products to be used, and shop drawings illustrating all details including connections to adjacent roofing and flashings materials for review and acceptance by the Preservation Consultant prior to installation.
- B. Refer to Drawing Sheet A3 for integration of Ice & Water Shield membrane with the EPDM membrane and the extent that both membranes are to extend above the bottom course of shingles.
- C. Refer to Drawing Sheet A4 for progress photographs of a similar installation of EPDM membrane in a wide valley at the base of a wood shingle roof.

END OF SECTION

SECTION 06250

CARPENTRY, FRAMING, AND WOOD CONSERVATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to the work of this section.
- B. The extent of work is shown on the drawings, and as scheduled herein.

1.02 DESCRIPTION OF THE WORK

- A. Provide all materials, labor and equipment necessary and/or required for the complete execution of the work of this Section and as indicated on the Drawings, including, but not limited to:
 - 1. Gutters: Provide new wood “V” shaped gutters complete with indicated hanging systems on rear facade leader (refer to Drawings 1/A6 & 3/A6).
 - 2. Downspouts: Provide new wood square sectioned downspouts on rear facade complete with brass or bronze hanging straps (refer to drawing 1/A6 & 2/A6).
 - 3. Rake Boards: Provide new rake boards to match existing on front facade gables (refer to drawing 1/A5).
 - 4. Rear Eaves: Provide new wood slanted soffit board and related blocking in conjunction with installing gutter hangers.
 - 5. Clapboards: Provide new western red cedar clapboards to replace any clapboards that cannot be retained and reused in conjunction with installing flashings at the junction of the front entry porch roof to the front facade clapboards.
 - 6. Roof Sheathing:
 - a. Inspect and replace defective roof sheathing to match existing as required; assume replacement of 100 square feet in base bid.
 - b. **UNIT PRICE #2:** Additions and subtractions to base bid amount of wood roof sheathing replacement per square foot (Base bid is 100 square feet).
 - 6. Paint: Backprime, prime and finish paint new wood trim and finish elements includ-

ing downspouts, gutters, rake boards, rear eaves trim, and clapboards as per Section 09900.

B. Definitions:

1. The terms “conserve”, “conservation repairs” and “restore” as used in this specification and as indicated on the Drawings shall include the following work activities:
 - a. Refastening of all existing sound but loose trim, and installation of all new or conserved elements in their original positions, together with any rough carpentry that may be required for sound installation.
 - b. Millwork to provide new exact replica elements to replace badly deteriorated or missing woodwork, or portions thereof, and inaccurately matched modern replacement elements. Replacement millwork shall duplicate the original element as to the species of wood, dimensions of the stock, exact profiles, and the methods of installation, unless otherwise indicated.
 - c. Conservation by epoxy consolidation and filling of deeply fissured, punky, or otherwise deteriorated finish woodwork and structural elements determined to be salvageable, together with wood Dutchmen inserts secured with epoxy adhesives where voids exceed 2 cubic inch in volume.
 - d. Filling of gaps between individual pieces of wood, and splits within single pieces where cyclical movement is anticipated, with the specified flexible sealant material.
 - e. Filling of small, shallow fissures less than 1/16” wide and 1/8” deep in wood surfaces with specified putty to produce a smooth, uniform surface that will not trap water. Putty filling is to be executed after application of prime coat of paint.
2. The terms “replicate” and “provide replica replacement”, and “replace to match existing” as used in this specification and as indicated on the Drawings shall include the following work activities:
 - a. Existing materials and finishes which can not be repaired or restored as defined above under conservation repairs, and therefore are not determined to be salvageable by the Preservation Consultant, shall be replaced by matching the best available representative original item in terms of color, dimension, texture, design, material, fabrication details, and installation. The replacement item shall also incorporate improvements which represent the best standards of fabrication and workmanship, so that even if an existing best example of an element is gouged, pitted, worn, or is missing sections, the new element shall be without such defects and fabricated from new material. Identification and selection of all original elements to be replicated shall be provided and approved by the Preservation Consul-

tant.

1.03. RELATED WORK SPECIFIED ELSEWHERE

- A. Carefully examine all of the Contract Documents for requirements which effect the work of this Section.
- B. Related Work Specified Elsewhere:
 - 1. Section 07300 - Wood Shingle Roofing
 - 2. Section 07600 - Flashing & Sheet Metal
 - 3. Section 09900 - Painting

1.04 INTENT

- A. It is the intent of this work provide a sound, functional gutters and downspouts on the rear facade, , and to replace all indicated trim to provide sound and functional exterior trim in relation to the roof.

1.05 QUALITY ASSURANCE

- A. The work of this Section shall be accomplished by a specialist firm of established reputation for performance of work of the highest quality having not less than five years of successful experience in the conservation and installation of exterior architectural trim and woodwork on buildings of similar age and type to the Witch House including at least 2 museum houses, or, if newly organized, whose personnel have previously established a similar reputation in the same field, and which is regularly engaged in and maintains a regular force of workman skilled in the work of this section.
- B. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques specified.
- C. The Contractor shall take all necessary field measurements prior to fabrication and installation of work and shall assume complete responsibility for accuracy of same.
- E. Quality Standard: Provide work complying with applicable requirements of AWI Architectural Woodwork Quality Standards. Where not otherwise indicated, provide work in accordance with AWI Premium Grade for materials and workmanship.
- F. Softwood Lumber Standards: Comply with PS 20, National Hardwood Lumber Association (NHLA) Rules, Western Wood Products Association (WWPA) rules and/or the applicable grading rules of the respective grading and inspecting agency for the species and product indicated.

- H. Hardwood Lumber Standard: Comply with National Hardwood Lumber Association (NHLA) rules, Western Wood Products Association (WWPA) grading rules, and all applicable rules of the respective grading and inspecting agency for the species and product indicated.
- I. Mock-Ups: Prior to the start of production conservation work for the respective items, provide full size mock-ups for each of the items listed in locations designated by the Preservation Consultant. Mock-ups will be used to measure standards of workmanship, finish, texture, material, and detail, and qualifications of workman with regard to requirements set forth in the Contract Documents. Obtain written acceptance of mock-up from Preservation Consultant before proceeding with production conservation work. Repeat mock-up procedure as required until accepted by the Preservation Consultant. Protect and mark accepted mock-ups, retain in undisturbed condition during construction to be used as a standard for acceptance of completed work. Unless otherwise indicated accepted mock-ups may be incorporated into production work.
 - 1. Gutter installation to demonstrate hanging details and relationship to roof edge, minimum length of 2'.
 - 2. Rake board installation, minimum length 4' demonstrating in stages the preparation of the substrate any new blocking as required for a sound installation, and the finished installation of the rake boards.

1.06 SUBMITTALS

- A. Work Plan: Submit work plan detailing schedule proposed to accomplish the work including the order in which specific areas will be worked on and protection of the building from inclement weather.
- B. Shop Drawings:
 - 1. Drawings at full scale showing exact profiles and dimensions for any molded millwork to be replaced (i.e., rakes, details of gutter and downspout fabrication, hangers for gutter)
- C. Samples:
 - 1. Provide full length samples of wood stock proposed for new trim, clapboards, and structural repairs.
 - 2. Provide samples of each type of wood, hardware, fasteners, paints, epoxies, fillers, adhesives, and other materials proposed for use. Provide unopened container of each material with manufacturer's original labeling.
 - 3. 2' sample of assembled wood gutter showing details of joinery, fastening, and instal-

lation of LCC lining.

4. 2' sample of assembled wood downspout showing details of joinery fastening, and installation of LCC lining.
5. Product Data. Submit manufacturers' technical data and Materials Safety Data Sheets for each product specified or proposed for use including recommendations for their application and use.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers. Store materials only in designated areas.
- B. Protect materials during storage and construction. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperatures.

1.08 PROJECT CONDITIONS

- A. Maintain optimum environmental conditions to prevent woodwork from shrinkage, swelling and all other forms of damage.
- B. Environmental requirements. Epoxies, adhesives, paints, putty, and sealants may only be applied to surfaces when air, surface and materials temperatures and moisture content are within the range approved by the manufacturers.
- C. Prevent epoxies, adhesives, paints, and sealants from staining surrounding building materials and objects. Clean up spills and drips immediately.

1.09 GUARANTEE

- A. Provide written warranty ensuring that all replacement and/or conserved wood elements, patching materials, adhesives, painted surfaces, and sealant joints shall remain sound and free of defects, cracks, peeling, deterioration, and discoloration for a period of two (2) years from the date of substantial completion, and that any such defects occurring within the warranty period will be repaired or replaced in a manner conforming with the requirements of these Contract Documents.

PART 2: – PRODUCTS

2.01 FINISH LUMBER

- A. Exterior Standing & Running Trim: For new elements provide Spanish Cedar, or Honduras Mahogany, all to be clear and vertical grained heartwood.
- B. For Dutchman repairs or splices to existing finish trim and structural members; match species and grain direction of the existing element.
- C. Gutters and downspouts: Spanish Cedar, or Honduras Mahogany, all to be clear and vertical grained heartwood.
- D. Clapboards: Western red cedar, clear all edge grained.
- D. Moisture content: For all dressed dimensional lumber – 15% maximum at installation and at time of dressing and complying with the dry size requirements of PS20. Mark lumber “ML-15”. Air dried lumber may be used provided it meets these requirements.

2.02. MISCELLANEOUS LUMBER

- A. All other misc. lumber and blocking: Construction Grade Eastern White Pine, Southern Yellow Pine, Douglas Fir, or White Oak.
- B. Moisture content:
 - 1. Eastern White Pine, Spruce Southern Yellow Pine, or Douglas Fir: 15% or less at time of dressing and installation.

2.03. ANCHORAGE AND FASTENING MATERIALS

- A. Select proper type, size, and materials for each application, except where specific items are indicated in these Contract Documents. All materials to be hot-dip galvanized, ASTM A153.
- B. Use hot dipped galvanized box or finish nails of appropriate length on exposed trim. The use of nail guns is prohibited except for specific applications where usage is approved in writing by the Preservation Consultant. Do not use dry wall or Phillips head screws where heads will be exposed to view.
- D. Use finish head Stainless steel screws to assemble gutters and downspouts.
- E. Brackets to support gutters: Stainless steel Alloy S30400, No. 1 Mill Finish, or wrought Iron, or cast bronze, shop fabricated to the patterns shown on the drawings.
- F. Straps to secure downspouts to building: 1/8”x 1” brass or bronze strips, formed as indicated on drawings.
- G. Wood Screws: FS FF-S-111

- H. Bolts and Studs: FS FF-B-575
- I. Nuts: FS FF-W-92
- J. Washers: FS FF-W-92
- K. Lag Screws or Lag Bolts: FS FF-B-561

2.04 WOOD PRESERVATIVES AND PAINT

- A. All new finish wood elements shall be back primed prior to installation with the priming paint specified in Section 09900 - Painting.

2.05. SEALANTS AND FILLERS

- A. Sealant/caulking compounds: paintable one part electrometric sealant complying with FS-TT-S-00230, Class A, Type II (non-sag).
 - 1. Sealant/caulking compounds for wood: Moorlastic 55 Year Urethane Acrylic Sealant 465 by Benjamin Moore Paints, Fed. Spec. TT-S-00230C Type II Class A.
 - 2. Putty Filler: Linseed oil based putty by DAP, Inc.

PART 3: EXECUTION

3.01 GENERAL

- A. Dismantle wood elements as required to carry out roofing, trim, and gutter installation along with care to not damage sound elements to be retained. All salvageable pieces shall be carefully numbered as to original location to facilitate reinstallation.
- C. Provide replacement elements for missing or severely deteriorated elements and for elements indicated to be replaced. New wood for finish trim shall be sanded smooth so that no machine milling marks are visible, and so that profile of new blends smoothly into profile of existing piece. Match thickness of material being replaced as required to replicate all visible surfaces.
- D. Back prime all new and existing exterior wood components on all concealed surfaces including end grain cuts before re-assembly using primers specified in Section 09900 - Painting.
- F. Reassemble dismantled components on building incorporating pieces that have been conserved or replaced with new wood. All exposed modern nail and screw heads shall be countersunk and filled with putty.

- G. Caulk all exposed joints between dissimilar materials and wood to wood joints as required to protect joints from water penetration while still allowing normal movement of separate pieces.
- H. Any questions concerning whether a specific item is to be replaced shall be referred to the Preservation Consultant for resolution.

3.02 GUTTER AND DOWNSPOUT INSTALLATION

- A. Remove eaves sloping soffit board and trim as required to install gutter brackets, examine blocking, sheathing, and other elements to remain and repair as required, and provide new blockings as required for sound installation of gutter brackets and soffit board.
- B. Review existing conditions and feasibility of the indicated design and materials for the gutter brackets with Preservation Consultant to finalize design and material before fabricating the brackets. Determine the extent that varying existing conditions at the eaves may require variable dimensions of the brackets. Note that existing roof plate configuration and location may vary from details in drawing.
- C. Install gutter brackets. Space gutter brackets to align with centers of existing studs so that fasteners can be installed into studs as well as the roof plate as required by existing conditions.
- D. To the extent feasible, set all gutters to have positive drainage to outlet tubes with no areas of ponding. Otherwise set gutters dead level with no areas of ponding.
- E. Make sure all outlet tubes and goosenecks fit to new wood downspout liners with sufficient lap that water does not spill out.
- F. Provide exposed elbows at base of downspout liner to direct water away from building foundation.
- G. Paint interior surface of all gutters and downspouts with oil primer before installation of Ice and water shield and lead coated copper liners.

3.03 RAKE BOARD REPLACEMENT

- A. After removal of roofing, remove all indicated rake boards on front facade. Use care to retain and reuse the existing backing board behind the two elements indicted to be removed.
- B. Install new blocking as required to support new rake boards.
- D. Install new rake boards matching dimensions and profiles of existing rake boards in-

cluding the molded portions, and taking care to properly miter joints with end-wall rake boards and returns to match existing configuration.

3.04 CLAPBOARDS

- A. Prepare new clapboards to match existing clapboards by planing to square up the rounded edges of the clapboards, and sanding the exposed face to remove the mill finish.
- B. Back prime all fresh cuts prior to installation.
- C. Install to match exposure of existing adjacent clapboards.
- D. Keep end of clapboards at least 1/2" above surface of flashings and shingles on roof pitch.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01000

GENERAL REQUIREMENTS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS: All of the Contract Documents, including General and Supplementary Conditions, apply to the work of this section. This section applies to all work performed under the Contract and is inherently made a part of each specification section.

1.02 DEFINITIONS:

- A. Provide: means furnish and install, complete with all necessary components and accessories, ready for intended use.
- B. Indicated: is a reference to other portions of the Contract Documents.
- C. Approved: Except where specifically stated otherwise, the words “approved”, “directed”, “requested”, “selected”, “accepted” mean “approved by the Preservation Consultant”, “directed by the Preservation Consultant” and so on. The words “approved” and “accepted” shall be held to the limitations stated in the General and Supplementary Conditions. In no case shall “approval” or “acceptance” by the Preservation Consultant be interpreted as a release of Contractor of his responsibilities to fulfill all of the requirements of the Contract Documents.
- D. Observe, Observation: Except as otherwise defined in greater detail, the Preservation Consultant’s observation of the work will be held to the limitations stated in the General and Supplementary Conditions and the Owner/Preservation Consultant agreement. In no case shall observation by the Preservation Consultant be interpreted as a release of Contractor of his responsibilities to fulfill all of the requirements of the Contract Documents. Observe shall be defined in accordance with the General Conditions of the Contract to include only visiting the site periodically, observing the condition and progress of the work, and reporting to the Owner.
- E. Furnish: Except as otherwise defined in greater detail, furnish means supply, including shop fabrication if applicable, and deliver to project site, ready for unloading, unpacking, assembly, installation and the like as applicable in each instance.
- F. Install: Except as otherwise defined in greater detail, install means operations at project site including, but not limited to, unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, placing in service and similar operations as applicable in each instance.

G. Installer: The person or firm engaged by Contractor or Subcontractor for performance of a specific unit of installation work at the project site. It is a general requirement that Installers be expert and experienced in the work they are engaged to perform.

H. Day : Except as otherwise defined in Owner-Contractor Agreement, day means calendar day.

1.03 INDUSTRY STANDARDS:

A. Referenced standards are part of the Contract Documents and have the same force and effect as if bound with these specifications.

B. Except where specifically indicated otherwise, comply with the current standard in effect as of the date of the Owner/Contractor Agreement.

C. Obtain copies of industry standards directly from publisher.

D. The titles of industry standard organizations are commonly abbreviated; full titles may be found in Encyclopedia of Associations.

E. Where workmanship is governed by a referenced standard, submit one copy to Owner and additional copies to fabricators, installers, and others involved in the performance of the work.

1.04 PROJECT SCHEDULE AND WORK PLAN: Submit work plan detailing schedule proposed to accomplish the work including the order in which specific areas will be worked on, and protection of the building from inclement weather, theft and vandalism. Indicate where materials will be stored and measures to insure that items to be removed and stored for reinstallation will be documented, marked, and protected during storage. Designate key personnel to coordinate work and schedule with the Owner. The work plan must indicate when specific roof pitches will be worked on, staging plans, and measures to protect users of the building and the site from construction activities and debris.

1.05 PAYMENT REQUESTS: Provide three copies of each request on completely filled out copies of AIA G702 and continuation sheet G703. Substantiate requests with complete documentation; include change orders to date. Provide partial lien waivers for work in progress and full lien waivers for completed work.

A. Before first payment application, provide the following:

1. List of Subcontractors, suppliers and fabricators.
2. Schedule of Values.
3. Progress Schedule.

4. Copies of permits and other communications from authorities.
5. Contractor's Certificate of Insurance.
6. Unit Price Schedule [if requested].

B. Before final payment application, provide and complete the following:

1. Complete closeout requirements.
2. Complete punch list items.
3. Settle all claims.
4. Transmit Record Documents to Owner and/or Preservation Consultant.
5. Prove that all taxes, fees and similar obligations have been paid.
6. Remove of temporary facilities and surplus materials.
7. Clean the work, including the attic areas below the roof.

1.06 PRECONSTRUCTION CONFERENCE: Require representatives of all major subcontractors and suppliers to attend; notify Owner at least thirty-six hours in advance.

1.07 PROGRESS MEETINGS: The Owner and Preservation Consultant will schedule regular weekly meetings to review the progress of the work. The Contractor and appropriate subcontractors shall attend these meetings on a regular basis. Additional field meetings may be held from time to time as required by the progress of the work.

1.08 STORAGE AND WORKSHOP AREA: The Contractor shall confine his apparatus, storage of materials, and operations of his workmen to limits within designated areas of the site as designated by the Owner and as required by the Preservation Consultant, and shall not unreasonably encumber the premises with his materials. Storage will be confined to specific areas of the site only.

- A. A portion of land to be designated by the Owner adjacent to the building will be available to the Contractor for storage. The Contractor will be fully responsible for the security of his tools and equipment stored on the site.
- B. The interior of the building will not be available for workshop space. The land designated for storage may also be used for a trailer housing a temporary workshop.

1.09 PARKING: There is no parking available on the site.

1.10 ACCESS AND OCCUPANCY: The building will not be open to the general public from November 1 thru May 1, but is still occupied by museum staff. The Contractor is cautioned that the building is a major tourist destination and that the public regularly visits the site even when the building is not open. Special care shall be taken by the Contractor to keep the Public well away from the building and all work areas at all times.

- A. The Contractor shall be responsible for furnishing and maintaining in a safe condition all barricades, temporary enclosures, and railings needed to keep the public out of the site work areas, including furnishing a temporary snow fence (i.e., orange plastic mesh) around the entire perimeter of the building and at grade work areas. The fence shall be placed a minimum of 25' from the exterior facades of the building or on the sidewalk line where the sidewalk is within 25' of the house. The Contractor Shall remove all barricades, temporary enclosures, and railings at the conclusion of the work.
- B. The Contractor shall maintain continual access to and egress from the building in a safe manner. The building will not be open to the Public during the construction period from November 1 to May 1, but Museum staff will be present in the building.
- C. All responsible care shall be taken to minimize inconvenience to the owner, and other authorized users of the site and adjacent land. The Contractor will also make sure that members of the Public do not enter the building (people frequently ask to see the interior if a door is open or they see activity within the building).
- D. Access to the interior by the Contractor shall be only as required for specific repairs and the use of the bathroom, and shall be limited to the specific rooms or spaces where work is taking place. A member of the museum staff must be present with the Contractor whenever interior access is required. All interior spaces must be left in original condition after access.

1.11 STAGING, SCAFFOLDING AND HOISTS: The Contractor shall furnish, erect, and maintain in a safe condition all staging, scaffolding, rigging, temporary stairs, ladders, ramps, runways, hoists, chutes, and planks, as required for his work and the work of all trades. Staging and related equipment shall be of approved design, erected and removed by experienced staging erectors, and shall conform to all applicable federal, state, and local laws. Contractor shall take measures to prevent unauthorized access to staging when he is not present on the site. Contractor shall coordinate erection and use of staging with the needs of all trades.

1.12 OLD WORK: Existing work shall be cut, altered, removed, or temporarily removed and replaced as necessary for the performance of the contract. Work remaining in place which is damaged or defaced by reason of work done under this contract shall be restored equal to its conditions at the time of the award of the contract. If removal of existing work exposes surfaces or work out of alignment, such surfaces shall be shimmed or the materials shall be replaced as necessary to make contiguous work uniform and harmonious.

- A. The Contractor is cautioned that all components of this building, both hidden and visible, are considered to be of substantial historic value. To the greatest extent feasible the Contractor shall not remove or damage existing work to accommodate new work unless specifically authorized by the Preservation Consultant.

1.13 PROTECTION OF EXISTING BUILDING & SITE: The Contractor shall provide necessary security and barricades, in or on the existing buildings, protect existing windows, siding, trim, and roofs from damage from staging, workmen, and abuse. Damaged areas are to be replaced to first class condition.

- A. The Contractor shall take measures to control dust and minimize the penetration of dust into all portions of the building including the attic. The Contractor shall provide temporary drop cloths in the attic to contain debris and prevent it from filtering into the second floor below.
- B. The Contractor shall provide secure closure relative to both weather and building security at all locations where exterior fabric is removed for repairs. He shall also provide secure barricades as required to prevent unauthorized access to staging.
- C. The Contractor shall protect all landscaping including lawns, shrubs, trees, other plants, paths and paving, signs, lights, fences from damage due to his operations. At the conclusion of the work all landscape features must be promptly restored to their original condition.
- D. Protect all cars parked in the vicinity of the work area from damage, or dust.
- E. Maintain protection at all times over all building entries to allow continuous safe access to the building.

1.14 MATCHING: Where matching is indicated, the Owner shall be the sole and final judge of what is an acceptable match.

1.15 OBSERVATION: Notify the Owner and authorities having jurisdiction at least thirty-six hours in advance of concealing any work.

1.16 CLEAN-UP & DUMPSTER: Keep work areas including the attic free from rubbish and material that cannot be salvaged. Project site shall be kept in good order on a daily basis and is to be cleaned up of rubbish at least once every day. All rubbish, including unwanted soil, is to be removed promptly and disposed of off the site in a manner meeting all applicable laws and regulations.

- A. No materials, rubbish, or debris will be permitted to drop free, but shall be removed by use of material hoists, rubbish chute, or other method approved by the Preservation Consultant.

- B. **Dumpster.** The use of a dumpster will only be allowed on a specific location on the site adjacent to the building to be designated by the owner.

1.17 INSTALLER'S ACCEPTANCE OF CONDITIONS: All installers shall inspect substrates and conditions under which work is to be executed and shall report in writing to the General Contractor all conditions detrimental to the proper execution and completion of the work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning work means installer accepts previous work and conditions.

1.18 WARRANTIES: Where a warranty is required, do not purchase or subcontract for materials or work until it has been determined that parties required to countersign warranties are willing to do so.

- A. **Warranty Forms:** Submit written warranty to Owner for approval prior to execution. Furnish two copies of executed warranty to Owner for his records.
- B. **Work Covered:** Contractor shall remove and replace other work of project which has been damaged as a result of failure of warranted work or equipment, or which must be removed and replaced to provide access to work under warranty. Unless otherwise specified, warranty shall cover full cost of replacement or repair, and shall not be pro-rated on basis of useful service life.
- C. **Warranty Extensions:** Work repaired or replaced under warranty shall be warranted until the original warranty expiration date or for ninety days whichever is later in time.
- D. **Warranty Effective Starting Date:** All warranties shall begin upon Substantial Completion of the project and shall run for the period indicated.

1.19 CUTTING AND PATCHING:

- A. **Limitations:** Do not cut and patch any work in a manner that would result in a failure of the work to perform as intended, increased maintenance, decreased operational life, decreased safety, or damage to historic fabric.
- B. **Structural Work:** Do not cut structural work or bearing walls. Where cutting and patching of structural work cannot be avoided, perform work in a manner which will not diminish structural capacity nor increase deflection of member. Provide temporary shoring and bracing as necessary. Ensure the safety of people and property at all times.
- C. **Materials:** Use materials identical to materials to be removed, cut and patched. If identical materials are not available or cannot be used, use materials that match existing materials to the greatest extent possible as approved by the Preservation Consultant. Provide finished work that will result in equal to or better than existing performance characteristics.

- D. Inspection: Before cutting and patching, examine surfaces and conditions under which work is to be performed and correct unsafe and unsatisfactory conditions prior to proceeding. Review areas that may be affected with the Preservation Consultant to identify historic fabric that may be affected prior to cutting and patching.
- E. Protection: Protect adjacent work from damage.

1.20 TEMPORARY FACILITIES:

- A. Toilet Facilities: The contractor may use the toilet inside the Witch House during normal business hours (i.e., 9-5 M-F) when the Witch House Director is present.
- B. Equipment and Tools: Provide all equipment including, but not limited to, hoists, lifts, scaffolding, machines, tools and the like, as needed for execution of the work. Provide safe access to all parts of the work.
- C. Security: Secure building and staging against unauthorized entry at all times. Provide secure, locked temporary enclosures. Protect the work at all times.
- D. Temporary Utilities: The Contractor may use the existing electric duplex outlet on the rear exterior wall of the building. There must be no electrical overload which will cause poor operation of existing electrical work. The Contractor and all sub-contractors, individually shall furnish all extension cords, sockets, lamps, and accessories required for their work and shall remove same after their purpose has been served.
 - 1. The Owner will arrange for water to be available from the existing faucet on the exterior of the adjacent building (Bowditch House) that is owned by Historic Salem Inc.
 - 2. The Owner shall pay electric service and water billings.
- E. Fire Prevention: Take every possible precaution to prevent fire. Store hazardous materials in a manner and at locations acceptable to authorities having jurisdiction. Provide at least 2 fire extinguishers that are charged and ready for use at all times for each work area. All work involving the use of furnaces, burning, welding, soldering or other heat producing apparatus shall be done with extreme care to prevent fire, and following any further restrictions described in the technical specifications.

1.21 DELIVERY, STORAGE, HANDLING AND INSTALLATION: Strictly comply with manufacturer's instructions and recommendations and prevent damage, deterioration and loss, including theft. Minimize long-term storage at the site. Maintain environmental conditions, temperature, ventilation, and humidity within range permitted by manufacturers of materials and products used.

1.22 COORDINATION: Cooperation with the Owner, Preservation Consultant, and sub-contractors in maintaining the orderly and continual progress of the work and the use of all facilities.

- A. Keep fully informed on all matters which affect this work. Attend meetings called by the Preservation Consultant or Owner for the purpose of facilitating or coordinating the work.

1.23 WORK BY OTHERS:

Work by other Contractors may be occurring to the interior and the rear facade during the construction period. The Contractor shall coordinate with any other Contractors doing work on the site in regards to the use of utilities, water, and toilet facilities, and scheduling of specific work activities so as not conflict with work by Others.

1.24 MEASUREMENTS: Before ordering any material or doing any work, the Contractor shall verify all measurements in the field and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of difference between actual dimensions and measurements indicated or scaled on the drawings; any differences which may be found shall be submitted to the Preservation Consultant in writing for consideration before proceeding with the work.

1.25 ERROR, OMISSIONS, AND INTENT OF THE DRAWINGS AND SPECIFICATIONS

- A. In the case of errors and/or omissions in the Drawings and/or Specifications noticed by the Contractor, the Preservation Consultant shall be notified in writing of such errors and/or omissions, and in no case shall work proceed without written permission of the Preservation Consultant.
- B. In the event that a conflict develops between field conditions and work shown on the Drawings or described in the Specifications, notify the Preservation Consultant of such discrepancies or conflicts prior to installation work; do not proceed with such work until the Preservation Consultant has issued written instructions resolving the matter in question. All work installed prior to coordination and the Preservation Consultant's approval that presents discrepancies and conflicts shall be dismantled and relocated, or reinstalled as approved by the Preservation Consultant.

1.26 ANNOTATED DRAWINGS AND DETAILS: Annotated drawings and photographs included in the contract documents shall be considered as drawings, and are intended to clarify the specific aspects of the work. Notes and instructions shall be considered "Typical" and shall apply to all similar conditions on the building illustrated, regardless of whether each instance of the condition is visible in the drawings.

1.27 BUILDING CODES: Comply with all applicable codes, ordinances, regulations and requirements of all authorities having jurisdiction including but not limited to the Massachusetts State Building Code, CMR 780 Sixth Edition, as amended, all City of Salem codes and ordinances, and Occupational Safety and Health Administration requirements.

- A. The Contractor shall procure all permits necessary to carry out the work of this Contract.

- B. Submit copies of all permits, licenses, certificates, inspection reports, releases, notices, judgments, and communications from authorities having jurisdiction.

1.28 RECORD DOCUMENTS: Keep record documents neatly and accurately. Record information as the work progresses and deliver to Preservation Consultant at time of final acceptance. Include in record documents all field changes made, all relevant dimensions, and all relevant details of the work. Keep record documents up to date with all field orders and change orders clearly indicated.

1.29 PROJECT CLOSE-OUT:

- A. Complete the following prior to Substantial Completion:

1. Provide Contractor's Punch List of incomplete items stating reason for incompleteness and value of incompleteness.
2. Advise Owner of insurance change over requirements.
3. Submit all warranties, maintenance contracts, final certificates and similar documents.
4. Obtain Certificate of Occupancy and similar releases which permit the Owner's full and unrestricted use of the areas claimed "Substantially Complete".
5. Submit record documents.
6. Complete clean up and restoration of damaged finishes.
7. Request Owner's and/or Preservation Consultant's inspection for Substantial Completion.

- B. Complete the following prior to Final Acceptance and Final Payment:

1. Obtain Certificate of Substantial Completion.
2. Submit final application for payment, showing final accounting of changes in the work.
3. Submit evidence of Contractor's continuing insurance coverage (if required by Contract Documents).

1.30 FINAL CLEANING: Remove all tools, surplus materials, temporary facilities, labels, dust, dirt, stains and protective wrappings or films. Repair and touch-up all damaged and deteriorated products and surfaces. Clean all dust and debris out of attic including unfinished portions and accessible adjacent crawl spaces.

1.31 NATIONAL REGISTER: The Witch House is listed on the State and National Registers of Historic Places and is a designated Massachusetts Historic Landmark. All work performed shall meet the *Secretary of the Interior's Standards for Historic Preservation Projects*.

PART 2- NOT USED

PART 3- NOT USED

END OF SECTION

GENERAL REQUIREMENTS