

Addendum No. 2

DATE: August 21, 2018

Project: WHA Job No. 2017-07
Phase IV - Building Improvements
MA 12-1 Great Brook Valley Gardens

In accordance with documents prepared by: *The Worcester Housing Authority.*

TO: ALL PLANHOLDERS--BIDDERS--PROPOSERS--CONTRACTORS

This Addendum No. 2 forms part of and modifies the Construction Documents dated July 2018. Acknowledge receipt of this Addendum in the space provided on the FORM FOR GENERAL BID. Failure to do so may subject the bidder to disqualification.

The attention of bidders submitting bids for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications are all to be included in and form a part of the bid submitted.

This Addendum consists of ITEMS 1 – 3 and Attachment A, which are hereby incorporated into the Bidding Documents:

REVISION TO SPECIFICATIONS:

ITEM NO. 1: SECTION 040100- MAINTENANCE OF BRICK MASONRY (filed sub-bid required)
DELETE: Entire Section 040100- Maintenance of Brick Masonry
INSERT: New Section 040100- Maintenance of Brick Masonry (Attachment A)

ITEM NO. 2: SECTION 071900- WATER REPELLENTS
DELETE: Section 071900 – Water Repellents

EMAIL QUESTIONS/CLARIFICATIONS:

ITEM NO. 3: QUESTIONS/CLARIFICATIONS:

1. Question: Please confirm that the cleaning and sealing of the brick masonry exterior facades is to be performed by Section 040100 and not Section 071900.

Response: Yes, cleaning and sealing of the brick masonry exterior facades is to be performed by Section 040100 (see Attachment A)

2. Question: Is the general contractor responsible for providing staging for the file sub-bidders?

Response: No. However, sub-bidders and general contractors should coordinate their work.

3. It is mentioned in the work included of Filed Sub-Bid Section 040100- Maintenance of Brick Masonry, however it is also mentioned in Section 071900- Water Repellents, which is part of the General Contractor scope of work. Please clarify who owns this section.

Response: The application of water repellents is part of Section 040100 MAINTENANCE OF BRICK MASONRY). Please, see Items No. 1 and No. 2 and Attachment A of this addendum.

All other terms and conditions of these contract documents remain unchanged.

Attachments: A). Section 040100- Maintenance of Brick Masonry.

**FAILURE TO ACKNOWLEDGE THIS ADDENDUM ON YOUR BID FORMS
MAY BE CAUSE FOR BID REJECTION.**

END OF ADDENDUM No. 2

ATTACHMENT "A"

Section 040100
Maintenance of Brick Masonry (*filed sub-bid required*)

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. All of the Contract Documents, including General and Supplementary Conditions and Division 0 – Bidding Documents, Contract Forms and Conditions of the Contract and Division 1 General Requirements apply to the work of this section.
- B. Carefully examine all the Contract Documents for requirements which affect the work of this section. The exact scope of this Section cannot be determined without a thorough review of all specification sections and other Contract Documents.
- C. Coordinate Work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under Contract.
- D. It is the intent of the Specifications and the Drawings to require that the materials and equipment to be furnished complete in every respect, and that this Contractor shall provide all items needed and usually furnished in connection with such systems to provide a complete installation. Equipment, materials, and articles incorporated in the Work shall be new and of the best grade of their respective kinds.

1.02 FILED SUB-BIDS

- A. MASONRY is stipulated as a Filed Sub-Bid under Part B, Item 2, of the FORM FOR GENERAL BID.
- B. All sub-bids shall be submitted on the FORM FOR SUB-BID furnished by the Awarding Authority as required by Section 44G of Chapter 149 of the General Laws, as amended.
- C. Sub-bids must be filed with the Awarding Authority in a sealed envelope, before the time stipulated on the ADVERTISEMENT, on the date stipulated in the ADVERTISEMENT.
- D. Specific information relating to sub-bidders is set forth in the CONTRACT DOCUMENTS under the heading, "NOTICE TO ALL BIDDERS", and the attention of the sub-bidders is directed thereto.
- E. The work to be done under this Section 042110 is described herein, in Section 042110, and on Drawings T1 through A.19.

1.03 GENERAL PROVISIONS – FILED SUB – BIDS

- A. Time, Manner, and Requirements for Submitting Sub-Bid. The work of this Section is stipulated as a filed sub-bid under the General Bid Form. Sub-bids shall be submitted the Work of this section in accordance with the provisions of M.G.L. c.149 44aA-J.
- B. Sub-bids for the work of this section shall be for the complete work and filed in a sealed envelope in strict compliance with and before the date and time set forth in the Advertisement. The procedures and requirements for submitting sub-bids are set forth in the Instructions to Bidders. The following information shall appear in the upper left hand of the envelope:

Name of Bidder
Name of Project
Project Number
Section Number and Name of Sub-trade

- C. Form of Sub-Bid. The Sub-bid for the work of this Section shall be made on the form of Sub-Bid (Section 040513.91); a copy for the use of sub-bidders in submitting sub-bids is included in the Bid Package.
- D. Bid Deposit. A bid deposit equal to five percent of the value of the bid must be submitted with the sub-bid. The value of the bid includes add alternates. The bid deposit may be in the form of a bid bond, cash, or a certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company, payable to the Worcester Housing Authority.

1.04 WORK TO BE PERFORMED

- A. Provide all the brick masonry work required to complete the work of the contract including all the brick masonry work shown on the plans, listed in the specification, and needed to install a complete assembly in every way, with all hardware, finishes, and accessories. Coordinate the brick masonry work with all the other trades for the project. Provide all demolition and disposal Work to complete the brick masonry work. Patch to match all adjacent surfaces that are disturbed, left exposed, or unfinished. All work of the contract is related. It is the General Contractor's responsibility to review all the work of each section, and each Subcontractor for the entire project so that all the work can be properly and completely performed.
- A. Work included: Provide labor materials and equipment necessary to complete the Work of this section, including but not limited to the following:
 - 1. Cut mortar joints for pointing.
 - 2. Remove bricks for replacement.
 - 3. Replace individual bricks.
 - 4. Repoint areas of brick masonry joints.
 - 5. All repair locations will be marked in the drawings and the field by the Authority. Repairs will be located at small individual locations throughout the entire scope area. Work performed without the approval of the Authority will not be paid for. See Unit Price Schedule in Section 01220 for quantities.

6. Round existing brick corners as required to ensure a flush finish of new metal corner guards.
7. Cleaning and coating with water repellent.
8. ADD ALTERNATE NO. 1 – All the work of the contract applied to Building No. 24.
9. ADD ALTERNATE NO. 2 – All the work of the contract applied to Building No. 23

1.05 QUALITY ASSURANCE

- A. Repair and restoration of existing masonry surfaces shall be performed by a skilled and experience subcontractor specializing in the restoration of masonry with at least five years of experience in the type of work involved.
- B. Repair and restoration of existing masonry work shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is a dispute as to whether or not duplication is successful or has been achieved to a reasonable degree, the Architect's judgment shall be final.
- C. Obtain materials from approved individual sources in sufficient quantities to complete each portion of the Work.
- D. Brick masonry units shall be of uniform quality, texture and color or a uniform blend within the ranges accepted for these characteristics to match original.
- E. Mortar ingredients shall be of uniform quality, texture and color to match original.
- F. Referenced Standards: Conform to State and Local Governing laws, Massachusetts or State Building Code, and the following standards:
 1. Brick Institute of America.
 2. Portland Cement Association.
 3. D 1653 Method B, Condition A – Test method to determine perm rating.
 4. D3960-93 - Practice for determining volatile organic compound content.
 5. ASTM.

1.06 SUBMITTALS

- A. Product Data:
 1. Submit manufacturer's product data for each type of masonry unit, accessory, and other manufactured products, including certifications that each type complies with specified requirements.
 2. Submit manufacturer's technical data sheet for each product indicated including chemical analysis and recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements.
 3. Submit a detailed plan for proposed application methods for each type of substrate for review and approval by Authority.
- B. Samples: All samples shall be presented for approval by the Authority.

1. Brick Repair Mortar:
 - a. Prepare, install, and finish each sample repair according to the specifications. All samples must be applied to masonry. Prepare samples in an area where they will be exposed to the same conditions as will be present on the building during curing. Allow samples to cure at least three days before obtaining the Authority's approval for color match. Mortar colors will continue to lighten as they cure and are exposed to the weather, so samples should be installed as far in advance as possible. A slightly darker color will give better long term results. Samples should be viewed from a minimum distance of 18-22 feet.

2. Brick:
 - a. Brick shall match original in quality, texture, color and size.
 - b. Provide brick samples.

3. Joint Mortar:
 - a. Mortar shall match original texture, color, joint size and finish.
 - b. Provide fully washed, cured, and dry mortar samples in a variety of colors for decision by the Authority. Provide samples in advance of the Work so as not to adversely affect the schedule.
 - c. No limit to number of samples.
 - d. WHA shall be contacted prior to the samples being performed in order that the pointing procedures can be viewed; said procedures shall be representative of the pointing procedures for the entire project, provided they are performed per this specification section and BIA standards.

4. Water Repellent
 - a. Mock-ups: Prepare sample for each type of substrate to be treated.
 - b. Provide at least one person who shall be present at all times during the execution of the work of this section, who shall be thoroughly familiar with the specified requirements, and the materials and methods needed for their execution, and who shall direct all work performed under this section.
 - c. Provide adequate numbers of workers skilled in the necessary crafts and properly informed of the specialized methods and materials to be used in this work.
 - d. Rilem testing shall take place on the test panels to determine efficacy and coverage rates as well as warranty information. An authorized distributor will oversee Rilem testing.
 - e. Projects requiring the 10 year warranty are required to submit the following information prior to the application of product:
 - i. Rilem testing before
 - ii. Rilem testing after
 - iii. Purchase order/Invoices for order
 - iv. Contractor/Applicator Information.
 - v. Specifier Information
 - vi. Owner Information

- f. No warranty will be issued on projects if application is started prior to testing completion.
- g. The Contractor shall arrange for preparing test panels to determine the coverage rates of each substrate. Size of testing area shall be no smaller than 1' SF.
- h. Contractor shall prepare a written report detailing results of testing including description of application methods employed.
- i. Each test panel must be carefully labeled, charted, and photographed. Approved test panels will become a part of the Work, and serve as the quality standard for similar type work on this project.
- j. Notify the Authority seven (7) days in advance of the dates and time when the test panels will be installed.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry materials in undamaged condition.
- B. Storage and Handling:
 - 1. Store and handle brick masonry units and materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion or other causes.
 - 2. Limit moisture absorption of brick masonry units and cement lime, etc., during delivery and until time of installation to the maximum percentage specified for brick for the average annual relative humidity as reported by the U.S. Weather Bureau Station nearest project site.
 - 3. Store cementitious materials off the ground, under weather tight covers or indoors, and kept clean and dry.
 - 4. Store aggregates where grading and other required characteristics can be maintained.
 - 5. Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.

1.08 PROJECT/SITE CONDITIONS

- A. Protection of Work:
 - 1. During erection, cover top of masonry element with waterproof sheeting at end of each day's Work.
 - 2. Cover partially completed structures when Work is not in progress.
 - 3. Extend cover minimum twenty-four inches (24") down both sides and hold cover securely in place.
 - 4. Do not apply loads for minimum three (3) days after building masonry walls.
- B. Staining:
 - 1. Prevent grout, mortar or soil from staining the face of masonry to be left exposed.
 - 2. Remove immediately grout or mortar in contact with such masonry.

3. Protect base of walls from rain-splashed mud and mortar splatter by means of covering spread on ground and over wall surface.

4. Protect sills, ledges, and projections from droppings of mortar.

C. Cold Weather:

1. No Masonry Work will be performed in temperatures lower than 40 degrees F and no material will be allowed to freeze within 48 hours of installation.

2. Provide temporary heat and winter protection at all new masonry to maintain temperature above 40 degrees F until cured.

3. Mortar admixtures are not allowed on this project.

PART 2 – PRODUCTS

2.01 MATERIALS, EQUIPMENT, AND FACILITIES

A. Requirements: Provide all materials, equipment, tools, appurtenances, facilities, and services as required for performing and completing all repair and restoration of existing unit masonry as indicated.

B. Equipment, Tools, and Materials: Provide appropriate and proper equipment, tools, and materials for the chipping and air-pressure cleaning of cracks in masonry, for pressure injection grouting of cracks in mortar joints, for water-blasting of masonry surfaces, and for hose cleaning of masonry.

C. Brick Repair Mortar

1. Premixed cementitious repair materials shall be formulated to match color and texture of the existing masonry, and do not contain any acrylic, latex, or synthetic polymer additives as manufactured by Jahn Restoration distributed by Cathedral Stone Products, Inc. or approved equal.

D. Brick

1. New brick shall match original brick in color, size and texture. Contractor shall provide brick and provide samples to match each building.

2. Brick shall be hard burned, water struck, clay brick conforming to ASTM C216, Grade SW, Type FBS, except that compressive strength shall not be less than 6,000 psi (individual) nor 8,000 psi (average of five) nor shall water absorption exceed 10% (individual) or 8% (average of five) when subjected to 5-hour boiling test, all in accordance with testing procedures defined in ASTM C67.

E. Joint Mortar

1. Mortar: Shall conform to ASTM C270, Type N, consisting of one (1) part Portland Cement (ASTM C150, Type 1, and meeting efflorescence requirements below), ½ to 1-1/4 parts hydrated lime (ASTM C207, Type S), and sand (ASTM C144) in quantity of

- not less than 2-1/2 nor more than 3 times the sum of the quantities of cement and lime, by volume.
- 2. New mortar at new brickwork and at all repointing locations shall match the original mortar in color, texture, aggregate and finish.
- 3. Tooled joint shall match original including depth of joint, shape of joint as well as amount of aggregate exposed.
- 4. Water shall be potable and free of injurious contaminants.
- 5. No admixtures of any type will be permitted.
- 6. Mixing: Combine and thoroughly mix cementitious, water, and aggregates in a mechanical batch mixer.

F. Water Repellent

- 1. Water based, environmentally safe, 50 state VOC compliant, free of flammable solvents and fumes, caustics and MUST NOT contain Silanes, Siloxanes or derivatives of Silanes and or Siloxanes. Products must be compatible with all porous masonry substrates including repair and replacement materials. Acceptable products R97 by Cathedral Stone Products or approved equal.
- 2. Testing requirements
 - a. Water repellent must not contain or produce any VOC's
 - b. Minimum rating of 80 perms when applied to manufactures specification.
 - c. Water Repellant must not lower the water vapor transmission (WVT) of the substrate by more than 1/3 of its pretreated value.
- 3. Miscellaneous Equipment
 - a. Natural bristle brushes
 - b. Rollers
 - c. Potable water
 - d. Rubber gloves
 - e. Eye and skin protection
 - f. Low pressure (10-25 psi.) Sprayer

- G. Cleaning Agent: Detergent, solvent cleaner, non-acid solution type: as manufactured by Proso, Sure Klean, or approved equal.

PART 3 – EXECUTION

3.01 MASONRY CONSTRUCTION, GENERAL

- A. Masonry Work shall be done by skilled workmen, fully instructed as to the requirements of this specification, and adequately supervised during the Work.
- B. Cold Weather Masonry:
 - 1. Do no Masonry Work when outdoor temperatures are less than 40° F unless provisions are made to adequately protect the masonry materials and finished Work from frost by heating materials, enclosing the Work, and heating the enclosed spaces.
 - 2. Antifreeze admixtures will not be allowed in the mortar. No frozen Work shall be built upon. No masonry unit having a film of frost on its surface shall be laid in the

Work. Any completed Work found to be affected by frost shall be taken down and rebuilt.

- C. Lay masonry plumb; true to line; with level courses; straight, clean, uniform joints; dry surfaces; and straight, plumb corners. Maintain vertical alignment of joints as required to match original bond patterns. Align horizontal joints with tops of openings, as indicated. Lay units in solid partitions in manner to provide same evenness of surface on each side.
- D. Adjust each masonry unit in final position while mortar is still soft and plastic. Remove any unit disturbed after mortar has stiffened and re-lay with fresh mortar.
- E. Provide all chases, slots, and recesses as required to accommodate the Work of other trades. Close only after such Work has been installed tested, and approved. As the Work progresses, set all anchors, bolts sleeves, frames, lintels, and all other items of the various trades required to be built-into the masonry.
- F. Do not use installed masonry Work to support or in any way receive scaffolding or other temporary supports.
- G. Provide complete protection against breakage, staining and weather damage to masonry. Masonry, when not roofed over, shall be positively protected with non-staining waterproof coverings, properly weighted, at night, during showers, and whenever masons are not working on the structure.
- H. Maintain masonry clean as the Work progresses. Exercise extreme care at exposed Work to prevent smearing or staining with mortar. Wash mortar stains immediately from exposed surfaces. At completion of Work cut out and repoint all holes and defective joints, leaving the entire Work free of blemishes.

3.02 BRICK REPAIR

A. PREPARATION FOR REPAIR

1. Remove all loose mortar and masonry prior to installation of the repair mortar. "Sound" masonry with a hammer to verify its integrity. If necessary, cut away an additional 1/2" of the substrate to ensure the surface to be repaired is solid and stable. Remove any sealant residue.
2. Where cramp anchors, threaded rod anchors, or dowels have been cut and pieces remain embedded in the substrate: Anchors that are free of rust, solidly embedded, and do not project beyond the surface of the masonry unit may remain. All others should be removed.
3. Cut the edges of the repair area to provide a minimum depth of 1/4". The edges of the repair should be square cut. Do not allow any feathered edges in the repair area.
4. For very dry or porous surfaces, pre-wet the substrate ahead of time to prevent the substrate from drawing moisture out of the repair too quickly. Re-wet the surface immediately before applying the repair material.

B. MIXING MORTAR FOR REPAIR

1. It is recommended that a dust mask be worn during mixing. Do not mix more material than can be used within 30 minutes. Discard any mixed material that has been unused for 30 minutes or more.
2. Mixing ratios for limestone, sandstone, granite, marble, brick, terra cotta, precast concrete, and structural concrete are as follows:
 - a. Approximately 4 ½ to 5 parts dry material to 1 part water:
M100 - Brick and Terra Cotta
3. Add water to dry ingredients and mix well. Adjust amount of water according to the weather and the porosity of the substrate.

C. APPLICATION OF REPAIR MATERIAL

1. Apply the mortar mix using a trowel in a series 1" lifts allowing mortar to dry approximately 10-20 minutes between lifts. If applied in layers, scrape off any cement skin that has formed and continue application. Dampen the surface before applying the next layer. Work mortar firmly into the surface of the masonry, including the corners, and under and around all mechanical anchors.
2. Build up repair material so that it is slightly above the adjacent masonry surface. Allow mortar 15 to 30 minutes to set slightly (wait time will vary with temperature and humidity—longer in cool weather), and then scrape off excess material using a straight edge (a plasterer's miter rod is good for this). Do not press down or "float" the repair. Where repairs occur at panel edges or corners, form mortar to match the profile of the surrounding masonry. In all cases, finish and texture repair so that it is as indistinguishable as possible from the adjacent masonry.

D. FINISHING TECHNIQUES

1. To obtain a smooth finish to match terra cotta, marble, or brick, the finished repair can be troweled to leave a smooth surface. This may cause the repair to lighten and may need to be stained or painted to match. Glazed surfaces can be matched using Cathedral Stone's masonRE Mineral Coating, and masonRE Terra Coat, or approved equal.
2. Clean any mortar residues from area surrounding the repair by sponging as many times as necessary with clean water. This should be done before repair material sets.
3. After the repair has been cured and allowed to dry for at least one week, if the appearance of a repair does not meet the specifications of the job, the surface color of the repair may be enhanced by applying a vapor permeable, mineral based pigmented stain.

E. CURING PROCEDURE

1. Lightly mist the repair with water to wet the entire surface of the finished repair approximately 30 minutes to 1 hour after completion on hot sunny days, and approximately 2 hours or longer, on cool or cloudy days. Time will vary with temperature and humidity. Mist several times a day during the 72 hours following the repair installation. Should access to the repairs be impossible for a period of time, plastic may be used to cover them temporarily. The application of plastic, however, does not remove the need for normal curing techniques. *Never cover repairs with plastic*

immediately after finishing—the water in the repair will be trapped on the surface, causing it to lighten.

3.03 POINTING

- A. Sawcut all joints to be pointed to a minimum depth of ($\frac{3}{4}$ ").
- B. New mortar shall match the existing masonry mortar. Point a sample area, (2' x 2') for approval. No Work shall commence without approval of sample by the Authority. The Authority shall be on site to observe the pointing procedures. Said procedures shall be representative of the procedures used throughout the project provided they are performed per this specification section and BIA standards.
- C. Pointing:
 - 1. During the tooling of joints, enlarge any voids or holes and completely fill with mortar prior to pointing.
 - 2. Mortar shall be applied in ($\frac{3}{8}$ " lifts maximum. Additional lifts shall be applied only when the previous lift is "thumbprint" hard.
 - 3. The use of mortar bags and/or mortar guns is prohibited. Use of such equipment will result in rejection of the work.
 - 4. Point up all joints including corners, openings, and adjacent Work to provide a neat, uniform appearance, prepared for application of sealants.
 - 5. The following BIA Technical Standards shall be included as part of this specification section: Technical Notes 8B; Technical Notes 46. Should there be a discrepancy between this specification and the BIA Technical Notes, the more stringent of the two shall apply.

3.04 ADJUSTING AND CLEANING

- A. Damaged or Defective Masonry:
 - 1. Remove and replace masonry units which are loose, chipped, broken, stained, or otherwise damaged at locations shown in the drawings.
 - 2. Provide new units to match adjoining units and install in fresh mortar pointed to eliminate evidence of replacement.
 - 3. Shove bricks into place (do not lay) in full mortar beds, with vertical and horizontal joints completely filled when laid. Do not slush. Strike exposed joints flush with face of brick, then finish to match original.
 - 4. When mortar at exposed joints has become partially set, and will make a thumbprint under pressure without displacement of mortar, the joints shall be tooled to match original.
 - 5. No cutting and patching of completed Masonry Work will be permitted except as approved by the Worcester Housing Authority.
- B. Final Cleaning
 - 1. General:
 - 2. After mortar is thoroughly set and cured, clean masonry.

3. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
4. Test cleaning methods on sample wall panel; leave 1/2 panel unclean for comparison purposes.
5. Obtain approval of the Worcester Housing Authority for sample cleaning before proceeding with cleaning of masonry.
6. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking.
7. Clean masonry to comply with masonry manufacturer's directions and BIA Technical Standards requirements.
8. Wet surfaces shall be thoroughly dry or dried before work started as specified in Section 09 090 00 – Painting and Coating.

3.05 WATER REPELLENT APPLICATION

- A. Contractor shall be responsible for repairing damaged masonry prior to application of water repellent.
- B. Repairs shall be made by qualified mechanics skilled in the type of repairs required, to the satisfaction of the owner's representative.
- C. Cover air intakes, air conditioning vents and similar openings that may come in contact with the water repellent and residues fumes. Leave covers in place until application of water repellent is completed in the area.
- D. Protect trees, plants, foliage, storm sewers, and surrounding surfaces from water repellent.
- E. Take appropriate precautions to avoid harm to building occupants, pedestrians and nearby property. Terminate work when wind drift may cause contact with passerby or vehicles and adjacent property.
- F. Preparation:
 1. Substrate must be clean, dry and free of foreign contaminates.
 2. Repair materials must be fully cured prior to applying water repellent.
 3. Protect adjacent masonry surfaces with drop cloths or other means where water repellent is not required. Special protection for windows is not required.
 4. Do not start work until surfaces to be coated are in proper condition to produce finished surfaces of uniform, satisfactory appearance.
 5. Mildew, algae and fungus should be removed using D/2 as recommended by the manufacturer.
 6. Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.
 7. Cracks and spalls must be repaired and cured prior to application.
 8. To ensure even penetration, make sure any masonry repairs have been made with repair materials that are compatible to the substrate.

9. Remove any previous or existing coatings before application of water repellent.

Note**: Substrate must be completely dry before coating. Do not work when precipitation is expected within 24 hours of installation. The water repellent needs adequate time to bond to the substrate. Moisture disrupts the curing process.

G. General application of water repellent

1. Follow manufacturers' instructions.
2. Clearly mark or identify areas that have been treated at the end of each shift.
3. Apply water repellent in a systematic pattern to ensure complete coverage.

3.06 CLEAN UP

- A. During the work, remove from the site discarded cleaning and coating materials, rubbish, cans and rags at the end of each workday.
- B. Upon completion of work, remove all protective coverings and coatings, and clean window glass and other spattered surfaces. Remove spattered coatings by proper methods as recommended by manufacturer, using care not to damage adjacent surfaces.

PART 4 – CONTRACTOR QUALITY CONTROL

4.01 QUALITY CONTROL

- A. The implementation of a Contractor Quality Control Program does not relieve the Contractor from the responsibility to provide work in accordance with the Contract Documents, applicable codes, regulations, and governing authorities. The Contractor Quality Control Program shall include, but not be limited to, the elements herein. These elements are provided only as a minimum starting point for the Contractor to use to generate the complete Contractor's Quality Control Program.

END OF SECTION