

BIDDERS COMPANY NAME:

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# Request for Proposal

## # 6548

# TUCK POINTING & CAULKING SERVICES

for

**110 N. Fourth Avenue  
Washtenaw County**

Prepared By:

Washtenaw County Purchasing  
Administration Building  
220 N. Main B-35  
Ann Arbor, MI 48107

Robert G. Devault, C.P.M.  
Purchasing Manager  
(734) 222-6760





## WASHTENAW COUNTY

Finance Department

**Purchasing Division**

220 N. Main, Ann Arbor, MI 48107-8645  
Phone (734) 222-6760, Fax (734) 222-6764

### REQUEST FOR PROPOSAL # 6548

July 16, 2010

Washtenaw County Purchasing Division on behalf of the Support Services – Facilities Management Division is issuing a Request for Proposal (RFP) # 6548 to provide interested contractors with sufficient information to enable them to prepare and submit proposals for consideration to provide tuck pointing & caulking services to Washtenaw County's facility located at 110 N. Fourth Avenue, Ann Arbor.

**Sealed Proposals:** Vendor will deliver one (1) original and two (2) copies to the following address:

**Washtenaw County Administration Building  
Purchasing Division  
220 N. Main St. Room B-35  
Ann Arbor, MI 48107**

## **BY 2:00 PM on Friday July 30, 2010**

**A Mandatory Walk through will be held on Friday July 23, 2010 at 2:00 PM. Potential vendors should meet in the conference Room #101 at the County Annex Building, 110 N. Fourth Avenue, Ann Arbor, Michigan 48105.**

**Proposals received after the above-cited time will be considered a late bid and are not acceptable unless waived by the Purchasing Manager.**

- The envelope must be clearly marked "SEALED RFP # 6548"
- Please direct purchasing and procedural questions regarding this RFP to Robert G. Devault, C.P.M. at (734) 222-6760 or [devaultb@ewashtenaw.org](mailto:devaultb@ewashtenaw.org)
- Technical questions may be directed to William Goebel (734) 260-5244 or email at [goebelb@ewashtenaw.org](mailto:goebelb@ewashtenaw.org)

Thank you for your interest

**I. PROPOSAL**

- Definitions:**
- “County”** is Washtenaw County in Michigan.
  - “Bidder”** an individual or business submitting a bid to Washtenaw County.
  - “Contractor”** One who contracts to perform services in accordance with a contract.

**II. PROPOSAL TERMS**

- A. Washtenaw County reserves the right to reject any and all proposals received as a result of this RFP. If a proposal is selected, it will be the most advantageous regarding price, quality of service, the Vendor’s qualifications and capabilities to provide the specified service, and other factors which Washtenaw County may consider. The County does not intend to award a Bid fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a Bid would be awarded, and negotiations would be undertaken with that provider whose proposal is deemed to best meet the County’s specifications and needs.
- B. The County reserves the right to reject any or all bids, to waive or not waive informalities or irregularities in bids or bidding procedures, and to accept or further negotiate cost, terms, or conditions of any bid determined by the County to be in the best interests of the County even though not the lowest bid.
- C. The price quotations stated in the bidder’s proposal will not be subject to any price increase from the date on which the proposal is opened at the County Purchasing Office to the mutually agreed-to date of Bid.
- D. Proposals must be signed by an official authorized to bind the provider to its provisions for at least a period of 90 days. Failure of the successful bidder to accept the obligation of the Bid may result in the cancellation of any award.
- E. In the event it becomes necessary to revise any part of the RFP, addenda will be provided. Deadlines for submission of the RFP’s may be adjusted to allow for revisions. To be considered, an original proposal and two copies must be at the County Purchasing Division on or before the date and time specified.
- F. Proposals should be prepared simply and economically providing a straight-forward, concise description of the vendor’s ability to meet the requirements of the RFP. Proposals shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed in ink by the person **signing** the proposal.

- G. **EXPERIENCE PACKAGE:** Bidders shall submit with their bid documentation of experience in similar type of historic rehabilitation projects. The masonry restoration firm shall demonstrate that it has specialized in the types of work required for this Project. The masonry restoration firm shall have a minimum of 10 years of experience with historic stone and brick masonry repointing and repairs, and as part of their bid shall submit examples of similar projects.

As evidence of this experience, bidders shall submit the following

- A minimum of five projects of similar scope and scale. For each project, submit photographs of the project, a brief description of the firm's responsibilities, and owner contact information. Projects dates shall demonstrate 10 years of experience in similar projects. Three of the 5 projects shall be within the last 5 years.
  - Resumes of key individuals who will manage and work on the project. Resumes shall show experience with similar historic rehabilitation projects.
- H. A standard contract will be executed between Washtenaw County and the contractor. Washtenaw County reserves the right to award the total proposal, to reject any and all proposals in whole or in part, and to waive any informality or technical defects if, in Washtenaw County's sole judgment, the best interests of Washtenaw County will be so served.
- I. In the event, the County receives two or more bids from responsive, responsible bidders, one or more of whom are Washtenaw County vendors and the bids are substantially equal in price, quality and service, the County shall award the contract to the most responsive, responsible Washtenaw County vendor. For purposes of this section, Washtenaw County vendor means a company which has maintained its principal office in Washtenaw County for at least six (6) months. Maintaining a Washtenaw County P.O. Box, is not, in and of itself, sufficient to establish a company as a Washtenaw County vendor. The County shall have sole discretion under this section to determine if a company qualifies as a Washtenaw County vendor and if two or more bids are substantially equal.

### **III. TERMS AND CONDITIONS**

#### **Award:**

Washtenaw County reserves the right to reject any and all proposals received as a result of this RFP. If a proposal is selected it will be the most advantageous regarding price, quality of service, the Vendors' qualifications and capabilities to provide the specified service, and other factors which the County may consider. The County does not intend to award a Bid fully on the basis of any response made to the proposal; the County reserves the right to consider proposals for modifications at any time before a Bid would be awarded, and negotiations would be undertaken with that Vendor whose proposal is deemed to best meet the County's specifications and needs.

#### **Term of Bid:**

The Bid is for the specific project proposed for the services to be performed late second quarter 2010. Project is to be completed within 10 weeks of contract execution which is anticipated to be 8/13/2010.

#### **IV. PROPOSAL SPECIFICATIONS**

The proposal shall include all of the following information. Failure to include all of the required information may result in disqualification of a Bidder.

##### **A. Scope of Services**

Washtenaw County wishes to obtain the services of a qualified contractor to perform tuck pointing & caulking services for Washtenaw County's facility located at 110 N. 4<sup>th</sup> Avenue, Ann Arbor as follows:

- The work is described in drawings and specifications enumerated as follows, as well as any addenda issued prior to the award of a contract:

##### Drawings

Sheet 1: West Elevation

Sheet 2: South Elevation

Sheet 3: East Elevation

Sheet 4: North Elevation

Sheet 5: Details

##### Specifications

SECTION 00435 – UNIT COSTS

SECTION 01230 ALTERNATES

SECTION 04910 MASONRY RESTORATION

- Contractor is responsible for all permits and licensing.
- Maintain public access to sidewalks and building entrances throughout the course of the project.
- Contractor is to ensure no work is performed that will alter the appearance, function, or historic nature of the building without express written consent of Washtenaw County.
- Due to the historic value of the building, bidders are to provide examples and current pictures of previous repointing projects with particular focus on historical buildings to show experience and expertise.
- The building is located in a City of Ann Arbor Historic District, and the facade of the building is subject to a historic preservation easement held by the Washtenaw County Historical Society. Work is subject to review for adherence to historic preservation standards by the easement holder. All work is to comply with the U. S. Secretary of the Interior's Standards for Rehabilitation of Historic Structures.

- Contractor must take adequate measures to prevent damage to existing roof, windows, awnings, and other building components.

## **B. Technical Specifications**

- Refer to Specification Sections 00435 Unit Costs, 01230 Alternates, and 04910 Masonry Restoration attached to the end of this RFP

## **V. CONTRACT PROVISIONS**

If a contract is awarded, the selected vendor will be required to adhere to a set of general contract provisions which will become a part of any formal agreement. These provisions are general principles which apply to all contractors of service to Washtenaw County such as the following:

### ARTICLE III - REPORTING OF CONTRACTOR

Section 1 - The Contractor is to report to Director of Support Services Technology & Operations and/or his designee and will cooperate and confer with him/her as necessary to insure satisfactory work progress.

Section 2 - All reports, estimates, memoranda and documents submitted by the Contractor must be dated and bear the Contractor's name.

Section 3 - All reports made in connection with these services are subject to review and final approval by the County Administrator.

Section 4 - The County may review and inspect the Contractor's activities during the term of this contract.

Section 5 - When applicable, the Contractor will submit a final, written report to the County Administrator.

Section 6 - After reasonable notice to the Contractor, the County may review any of the Contractor's internal records, reports, or insurance policies.

### ARTICLE V - PERSONNEL

Section 1 - The contractor will provide the required services and will not subcontract or assign the services without the County's written approval.

Section 2 - The Contractor will not hire any County employee for any of the required services without the County's written approval.

Section 3 - The parties agree that the Contractor is neither an employee nor an agent of the County for any purpose.

Section 4 - The parties agree that all work done under this contract shall be completed in the United States and that none of the work will be partially or fully completed by

either an offshore subcontractor or offshore business interest either owned or affiliated with the contractor. For purposes of this contract, the term, "offshore" refers to any area outside the contiguous United States, Alaska or Hawaii.

#### ARTICLE VI - INDEMNIFICATION AGREEMENT

The contractor will protect, defend and indemnify Washtenaw County, its officers, agents, servants, volunteers and employees from any and all liabilities, claims, liens, fines, demands and costs, including legal fees, of whatsoever kind and nature which may result in injury or death to any persons, including the Contractor's own employees, and for loss or damage to any property, including property owned or in the care, custody or control of Washtenaw County in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or non-performance of work in connection with this contract resulting in whole or in part from negligent acts or omissions of contractor, any sub-contractor, or any employee, agent or representative of the contractor or any sub-contractor.

#### ARTICLE VII - INSURANCE REQUIREMENTS

The Contractor will maintain at its own expense during the term of this Contract, the following insurance:

1. Workers' Compensation Insurance with Michigan statutory limits and Employers Liability Insurance with a minimum limit of \$100,000 each accident for any employee.
2. Commercial General Liability Insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage. The County shall be added as "additional insured" on general liability policy with respect to the services provided under this contract.
3. Automobile Liability Insurance covering all owned, hired and nonowned vehicles with Personal Protection Insurance and Property Protection Insurance to comply with the provisions of the Michigan No Fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each accident for bodily injury and property damage.

Insurance companies, named insureds and policy forms may be subject to the approval of the Washtenaw County Administrator, if requested by the County Administrator. Such approval shall not be unreasonably withheld. Insurance policies shall not contain endorsements or policy conditions which reduce coverage provided to Washtenaw County. Contractor shall be responsible to Washtenaw County or insurance companies insuring Washtenaw County for all costs resulting from both financially unsound insurance companies selected by Contractor and their inadequate insurance coverage. Contractor shall furnish the Washtenaw County Administrator with satisfactory certificates of insurance or a certified copy of the policy, if requested by the County Administrator.

No payments will be made to the Contractor until the current certificates of insurance have been received and approved by the Administrator. If the insurance as evidenced by the certificates furnished by the Contractor expires or is canceled during the term of the contract, services and related payments will be suspended. Contractor shall furnish the County Administrator's Office with certification of insurance evidencing such coverage and endorsements at least ten (10) working days prior to commencement of

services under this contract. Certificates shall be addressed to the County Administrator, P. O. Box 8645, Ann Arbor, MI, 48107, and shall provide for 30 day written notice to the Certificate holder of cancellation of coverage.

#### ARTICLE VIII - COMPLIANCE WITH LAWS AND REGULATIONS

The Contractor will comply with all federal, state and local regulations, including but not limited to all applicable OSHA/MIOSHA requirements and the Americans with Disabilities Act.

#### ARTICLE IX - INTEREST OF CONTRACTOR AND COUNTY

The Contractor promises that it has no interest which would conflict with the performance of services required by this contract. The Contractor also promises that, in the performance of this contract, no officer, agent, employee of the County of Washtenaw, or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or the interest of any corporation, partnership or association in which he/she is directly or indirectly interested or has any personal or pecuniary interest. However, this paragraph does not apply if there has been compliance with the provisions of Section 3 of Act No. 317 of the Public Acts of 1968 and/or Section 30 of Act No. 156 of Public Acts of 1851, as amended by Act No. 51 of the Public Acts of 1978, whichever is applicable.

#### ARTICLE X - CONTINGENT FEES

The Contractor promises that it has not employed or retained any company or person, other than bona fide employees working solely for the Contractor, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than bona fide employees working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or making of this contract. For breach of this promise, the County may cancel this contract without liability or, at its discretion, deduct the full amount of the fee, commission, percentage, brokerage fee, gift or contingent fee from the compensation due the Contractor.

#### ARTICLE XI - EQUAL EMPLOYMENT OPPORTUNITY

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, sexual orientation, national origin, physical handicap, age, height, weight, marital status, veteran status, religion and political belief (except as it relates to a bona fide occupational qualification reasonably necessary to the normal operation of the business).

The Contractor will take affirmative action to eliminate discrimination based on sex, race, or a handicap in the hiring of applicant and the treatment of employees. Affirmative action will include, but not be limited to: Employment; upgrading, demotion or transfer; recruitment advertisement; layoff or termination; rates of pay or other forms of compensation; selection for training, including apprenticeship.

The Contractor agrees to post notices containing this policy against discrimination in conspicuous places available to applicants for employment and employees. All solicitations or advertisements for employees, placed by or on the behalf of the Contractor, will state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, sexual orientation, national origin,

physical handicap, age, height, weight, marital status, veteran status, religion and political belief.

#### ARTICLE XII - PREVAILING WAGE RATES AND CUB AGREEMENT

The Contractor agrees that all craftsmen, mechanics and laborers it employs to work on this project shall, at a minimum, receive the prevailing wages and fringe benefits of the Building Trade Department for corresponding classes of craftsmen, mechanics and laborers for the Washtenaw County area, as determined and published by the Davis-Bacon Division of the United States Department of Labor. Contractor agrees that all subcontracts entered into by the Contractor shall contain a similar provision covering any sub-contractor's employees who perform work on this project. Contractor further agrees to sign a project labor agreement as provided by the Construction Unity Board ("CUB Agreement"). A copy of the CUB Agreement is attached as an appendix to this Contract.

#### ARTICLE XIII - EQUAL ACCESS

The Contractor shall provide the services set forth in Article I without discrimination on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, physical handicap, or age.

#### ARTICLE XIV - OWNERSHIP OF DOCUMENTS AND PUBLICATION

All documents developed as a result of this contract will be freely available to the public. None may be copyrighted by the Contractor. During the performance of the services, the Contractor will be responsible for any loss of or damage to the documents while they are in its possession and must restore the loss or damage at its expense. Any use of the information and results of this contract by the Contractor must reference the project sponsorship by the County. Any publication of the information or results must be co-authored by the County.

#### ARTICLE XV - ASSIGNS AND SUCCESSORS

This contract is binding on the County and the Contractor, their successors and assigns. Neither the County nor the Contractor will assign or transfer its interest in this contract without the written consent of the other.

#### ARTICLE XVI - TERMINATION OF CONTRACT

Section 1 - Termination without cause. Either party may terminate the contract by giving thirty (30) days written notice to the other party.

#### ARTICLE XVII - PAYROLL TAXES

The Contractor is responsible for all applicable state and federal social security benefits and unemployment taxes and agrees to indemnify and protect the County against such liability.

#### ARTICLE XVIII - PRACTICE AND ETHICS

The parties will conform to the code of ethics of their respective national professional associations.

ARTICLE XIX- CHANGES IN SCOPE OR SCHEDULE OF SERVICES

Changes mutually agreed upon by the County and the Contractor, will be incorporated into this contract by written amendments signed by both parties.

ARTICLE XX - CHOICE OF LAW AND FORUM

This contract is to be interpreted by the laws of Michigan. The parties agree that the proper forum for litigation arising out of this contract is in Washtenaw County, Michigan.

ARTICLE XXI - EXTENT OF CONTRACT

This contract represents the entire agreement between the parties and supersedes all prior representations, negotiations or agreements whether written or oral.

**BID SHEET**

The undersigned agrees to enter into an agreement with the County to provide the services described for:

\$ \_\_\_\_\_

---

*(Above amount in words)*

**UNIT COSTS**

Enter add and deduct costs for work that may be added or deducted from the contract after the start of construction. Refer to Specification Section 00435 – Unit Costs for additional information.

	<u>ADD</u>	<u>DEDUCT</u>
1. Brick repointing, per square foot:	\$ _____	\$ _____
2. Deep brick repointing, per square foot:	\$ _____	\$ _____
3. Remove and reset bricks, per square foot:	\$ _____	\$ _____
4. Stone repointing, per lineal foot:	\$ _____	\$ _____
5. Replace sealant, per lineal foot:	\$ _____	\$ _____
6. Replace existing lead cap with new lead cap, per each:	\$ _____	\$ _____
7. Removal of cementitious patches or parging; replacement with brick and mortar, per square foot:	\$ _____	\$ _____
8. Removal of high-strength mortar; repointing, per square foot.	\$ _____	\$ _____
9. Installation of helifix anchors, per each:	\$ _____	\$ _____

## ALTERNATES

Refer to Specification Section 01230 – Alternates for additional information

The following work items are indicated on the Bid Drawings as alternates. They are not to be included in the base bid amount. Bidder shall state below, in the space provided, the amount to be added to the Base Bid if the Owner elects to make the changes described in the Alternates.

1. ADD ALTERNATE NO. 1: Additional Brick Repointing – North Elevation

ADD \$ \_\_\_\_\_

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*(Above amount in words)*

## EXPERIENCE PACKAGE

Initial here to confirm that the historic preservation experience package required in Section II-G of this RFP has been included with this bid: \_\_\_\_\_

## ADDENDA

The Contract Documents may be amended during the bidding period by addenda. The bidder shall acknowledge the receipt of any addenda and that their content has been included in the bid by writing in the addendum number and initialing below:

ADDENDUM NO.

BIDDER'S INITIALS

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SIGNATURE PAGE**

_____ Signature	_____ Company Name
_____ Print Name	_____ Company Address
_____ Title	_____ City, St. Zip
_____ Telephone #	_____ Fax #
_____ Email Address	_____ Purchase Order Email Address
_____ Federal Tax ID #	

The above individual is authorized to sign on behalf of company submitting proposal.

Proposals must be signed by an official authorized to bind the provider to its provisions for at least a period of 90 days.

**By checking this box we hereby certify that we are a Washtenaw County company as defined in paragraph II.,I. above. If proven otherwise you may be subject to Disbarment and/or Suspension of doing business with Washtenaw County.**

# MEMORANDUM OF UNDERSTANDING

## 1. WORK DISPUTES

In return for the promise made in paragraph (3) below, the parties agree that there will be no strike, work stoppage or lock-out for the duration of this Memorandum. Any jurisdictional dispute shall be resolved through normal procedures.

There will be a job conference with all contractors and sub-contractors prior to starting work.

## 2. COFFEE BREAKS

There shall be no organized coffee breaks.

## 3. PAYMENT OF FRINGES

Any Union having a claim against a contractor or subcontractor for unpaid wages and/or fringe benefits for work performed on the project shall give written notice of such claim to such contractor or subcontractor (with a copy of the notice to the Construction Manager or General Contractor) within three (3) business days after such claim has become known. Upon receipt of such written notice, the Construction Manager or General Contractor involved shall withhold an amount equal to the claim from the next disbursement payable to the contractor, pending resolution of the dispute satisfactory to the Construction Manager or General Contractor. In the event of any such dispute, the Union agrees to use its best efforts to pursue any legal remedies available, including litigation by Fund Trustees. It is understood that the intent to this section is to accomplish prompt and effective resolution of any disputes between the Union and any contractor or subcontractor over payment of wages and fringes.

## 4. UNION WORK

The parties understand and agree that each contractor and subcontractor at all tiers of this project shall, prior to beginning work on the project, become signatory parties to the respective current collective bargaining agreements of the appropriate Local Unions of the Washtenaw County Skilled Building Trades Council.

\_\_\_\_\_  
(Contractor, Owner or Construction Manager)

\_\_\_\_\_  
(Representative of Washtenaw County Skilled  
Building Trades Council)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Project Description)

\_\_\_\_\_  
(Date)

**THIS MEMORANDUM APPLIES ONLY TO THE PROJECT AND/OR CONSTRUCTION ABOVE DESCRIBED.**

WHITE – Union Copy  
GREEN – Contractor or Construction Manager Copy  
CANARY – Owner Copy  
PINK – CUB Copy  
GOLD – Project Copy



- LEGEND**
- REMOVE EXISTING BRICKS; REBUILD WITH SAME BRICKS
  - REMOVE EXISTING CEMENTITIOUS PARGING; INFILL WITH BRICK MASONRY TOOTHED INTO EXISTING
  - REPOINT BRICK MASONRY
  - DEEP REPOINT BRICK MASONRY
  - REPOINT STONE MASONRY
  - REMOVE HIGH-STRENGTH MORTAR; REPLACE WITH SOFT MORTAR.
  - RAKE OUT MORTAR JOINT AND PROVIDE SEALANT AND BACKER ROD
  - PROVIDE LEAD JOINT CAPS SET IN SEALANT IN SKY FACING JOINTS

**GENERAL NOTES:**

1. REMOVE EXISTING SEALANT AT ALL WINDOW PERIMETERS; INSTALL NEW WITH BACKER RODS.
2. PROVIDE SEALANT AT JOINT BETWEEN PAVEMENT AND BUILDING WALL AROUND THE ENTIRE PERIMETER



FOURTH LEVEL  
FIN. PL. = 137'-4"

THIRD LEVEL  
FIN. PL. = 124'-8"

SECOND LEVEL  
FIN. PL. = 113'-4"

FIRST LEVEL  
FIN. PL. = 100'-0"

GARDEN LEVEL  
FIN. PL. = 39'-0"

<p>Masonry Restoration - Phase 1 Washtenaw County Annex Building 110 N. Fourth Ave. Ann Arbor, MI</p>	<h2 style="margin: 0;">West Elevation</h2>	<p><b>ISSUE DATES:</b> 01 June, 2010 - Issue for Bids</p>	<p><b>GREGORY A. JONES, AIA, ARCHITECT</b> 2520 DEVONSHIRE RD. ANN ARBOR, MI 48104 734-646-5475</p>	<p>SHEET NO. <b>1</b> OF 5 SHEETS</p>
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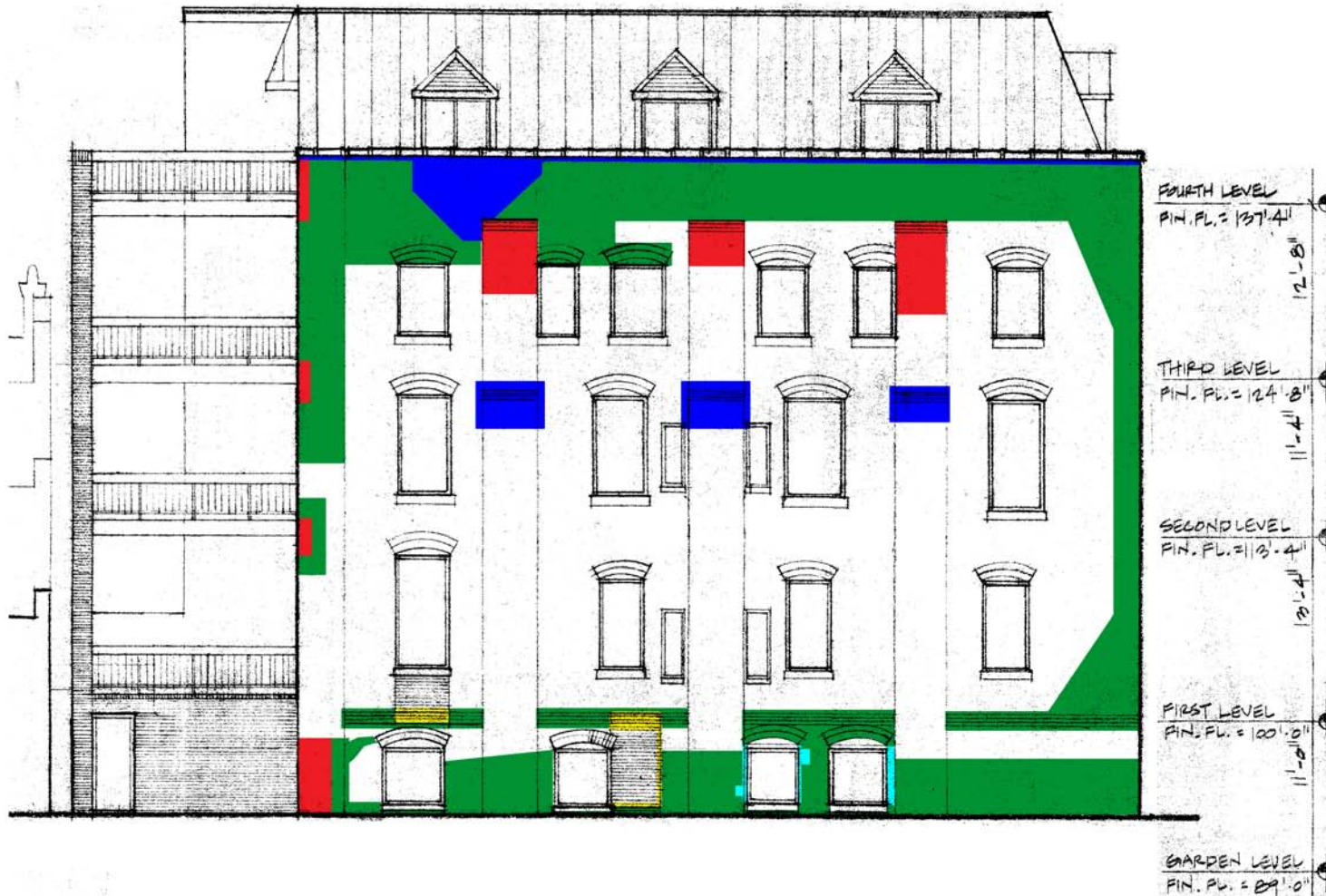
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**GENERAL NOTES:**

1. REMOVE EXISTING  
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WINDOW PERIMETERS;  
INSTALL NEW WITH  
BACKER RODS.
2. PROVIDE SEALANT AT  
JOINT BETWEEN  
PAVEMENT AND  
BUILDING WALL AROUND  
THE ENTIRE PERIMETER



<p>Masonry Restoration - Phase 1 Washtenaw County Annex Building 110 N. Fourth Ave. Ann Arbor, MI</p>	<h2 style="margin: 0;">North Elevation</h2>	<p><b>ISSUE DATES:</b> 01 June, 2010 - Issue for Bids</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><b>GREGORY A. JONES, AIA, ARCHITECT</b> 2520 DEVONSHIRE RD. ANN ARBOR, MI 48104 734-646-5475</p>	<p>SHEET NO. <b style="font-size: 2em;">2</b> OF 5 SHEETS</p>
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- LEGEND**
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  - PROVIDE LEAD JOINT CAPS SET IN SEALANT IN SKY FACING JOINTS

**GENERAL NOTES:**

1. REMOVE EXISTING SEALANT AT ALL WINDOW PERIMETERS; INSTALL NEW WITH BACKER RODS.
2. PROVIDE SEALANT AT JOINT BETWEEN PAVEMENT AND BUILDING WALL AROUND THE ENTIRE PERIMETER

Masonry Restoration - Phase 1  
Washtenaw County Annex Building  
110 N. Fourth Ave.  
Ann Arbor, MI

**East Elevation**

ISSUE DATES:
01 June, 2010 - Issue for Bids

GREGORY A. JONES, AIA, ARCHITECT  
2520 DEVONSHIRE RD.  
ANN ARBOR, MI 48104  
734-646-5475

SHEET NO.  
**3**  
OF 5 SHEETS

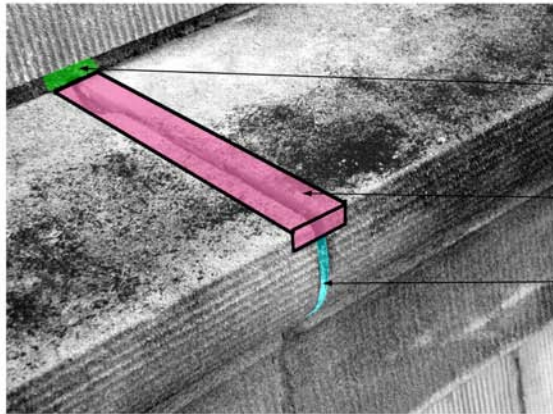


- LEGEND**
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INSTALL NEW WITH  
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  2. PROVIDE SEALANT AND  
BACKER ROD AT JOINT  
BETWEEN PAVEMENT AND  
BUILDING WALL AROUND  
THE ENTIRE PERIMETER  
OF BUILDING



<p>Masonry Restoration - Phase 1 Washtenaw County Annex Building 110 N. Fourth Ave. Ann Arbor, MI</p>	<h2 style="margin: 0;">South Elevation</h2>	<p><b>ISSUE DATES:</b> 01 June, 2010 - Issue for Bids</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><b>GREGORY A. JONES, AIA, ARCHITECT</b> 2520 DEVONSHIRE RD. ANN ARBOR, MI 48104 734-646-5475</p>	<p>SHEET NO. <b style="font-size: 2em;">4</b> OF 5 SHEETS</p>
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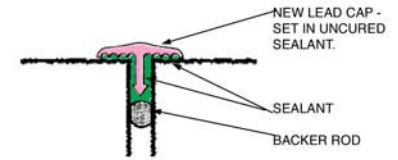


SEALANT

NEW LEAD CAP IN OPEN JOINTS. SEE DET. 1 THIS SHT. BEND 1/2" OVER FRONT EDGE.

REPOINT FRONT SURFACE WITH MORTAR

② REPAIR AT OPEN JOINT



NEW LEAD CAP - SET IN UNCURED SEALANT.

SEALANT

BACKER ROD

① NEW LEAD CAP DETAIL

Masonry Restoration - Phase 1  
 Washtenaw County Annex Building  
 110 N. Fourth Ave.  
 Ann Arbor, MI

**Cornice Joint Details**

**ISSUE DATES:**

01 June, 2010 - Issue for Bids

**GREGORY A. JONES, AIA, ARCHITECT**  
 2520 DEVONSHIRE RD.  
 ANN ARBOR, MI 48104  
 734-646-5475

SHEET NO.  
**5**  
 OF 5 SHEETS

**SECTION 00435  
UNIT PRICE SCHEDULE**

**PART 1 - GENERAL**

**1.1 GENERAL**

- A. The undersigned Bidder submits the scheduled unit prices as a supplement to Bidder's proposal.
- B. The unit prices listed in the schedule govern for authorized changes in the Work to represent the in-place cost of the item, and shall be determined and applied in accordance with instructions in the Conditions of the Contract.
- C. Submit the Unit Price Schedule as directed in the Instructions to Bidders.
- D. Furnish price for deletion of Work as well as addition, where space is so provided.

**1.2 DIVISION 4 – MASONRY**

- A. Section 04910 – Masonry Restoration

	<u>ADD</u>	<u>DEDUCT</u>
1. Brick repointing, per square foot:	\$ _____	\$ _____
2. Deep brick repointing, per square foot:	\$ _____	\$ _____
3. Remove and reset bricks, per square foot:	\$ _____	\$ _____
4. Stone repointing, per lineal foot:	\$ _____	\$ _____
5. Replace sealant, per lineal foot:	\$ _____	\$ _____
6. Replace existing lead cap with new lead cap, per each:	\$ _____	\$ _____
7. Removal of cementitious patches or parging; replacement with brick and mortar, per square foot:	\$ _____	\$ _____
8. Removal of high-strength mortar; repointing, per square foot:	\$ _____	\$ _____

COUNTY OF WASHTENAW  
WASHTENAW COUNTY ANNEX BUILDING  
MASONRY RESTORATION – PHASE 1

GREGORY A. JONES, AIA,  
ARCHITECT  
JUNE 1, 2010

9. Installation of helifix anchors, per each:     \$\_\_\_\_\_     \$\_\_\_\_\_

**END OF SECTION**

## **SECTION 01230 ALTERNATES**

### **PART 1 - ALTERNATES**

#### **1.1 ALTERNATES - GENERAL**

- A. Bidder shall state in the Bid Form, in the space provided, the amount to be added to or deducted from the Base Bid if the Owner elects to make the changes described in the Alternates.
- B. All requirements of the Specifications shall govern the Alternate Work, except as specifically modified herein. The Work required under the Alternates shall be complete, and the Bidder shall include the work of all trades in connection therewith, even though not described, shown on the Drawings nor mentioned in the Specifications.
- C. Alternates are indicated on the Drawings.

#### **1.2 ADD ALTERNATE NO. 1: Additional Brick Repointing – North Elevation.**

**END OF SECTION**

## **SECTION 04910 MASONRY RESTORATION**

### **PART 1 - GENERAL**

#### **1.1 REFERENCES**

- A. American Society for Testing and Materials (ASTM)
  - 1. C91 - Specification for Masonry Cement.
  - 2. C144 - Specification for Aggregate for Masonry Mortar.
  - 3. C150 - Specification for Portland Cement.
  - 4. C207 - Specification for Hydrated Lime for Masonry Purposes.
  - 5. C270 - Specification for Mortar for Unit Masonry.
  - 6. C404 - Specification for Aggregates for Masonry Grout.
  - 7. C476 - Specification for Grout for Masonry.
  - 8. C797
  - 9. C1107 - Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

#### **1.2 SUMMARY**

- A. Work for this section is indicated on drawings, and generally consists of:
  - 1. Exterior brick and stone masonry repair, repointing, removal, resetting, anchoring, rebuilding, and similar and related work.

#### **1.3 SPECIAL REQUIREMENTS**

- A. Historic Preservation Requirements
  - 1. This building is listed in the National of Historic Places. All work shall be in accordance with the *U. S. Secretary of the Interior's Standards for Rehabilitation of Historic Properties*. Work indicated and specified is in accordance with the *Standards*, and contractor's work shall also comply with the *Standards*.
    - a. Do not deviate from, modify, or make substitutions in the work, materials, products, scope, procedures indicated or specified without the Architect's approval.
    - b. Give preference to repair of existing materials and building elements rather than replacement.
    - c. Take great care to prevent damage to existing materials. Use the gentlest means and methods available to carry out the work indicated and specified. Test and practice means and methods in inconspicuous areas until it is determined that they can be carried out without damage to materials to remain.

#### **1.4 DEFINITIONS**

- A. Repointing: The process of raking out (removing) mortar and replacing it with new mortar.
- B. Pointing: The process of placing new mortar in existing joint spaces, which have previously been raked out. This term does not include the raking out process.
- C. Tuckpointing: The process of touching up existing mortar joints by filling in recesses with new mortar, without first raking out the joints.
- D. Deep Repointing: The process of placing new mortar in existing joint spaces, which have previously been raked out. This term does not include the raking out process.
- E. Match Existing: New materials and products shall match existing in material, size, shape, profile, configuration, color, texture, tooling, quality of workmanship, and visual appearance. Replacement materials shall not be visually discernable from adjacent existing materials, except for minor differences relating to weathering or age.
- F. Salvage/Retain: Carefully remove materials or components in a manner that will permit reuse or reinstallation in this project.

#### **1.5 SUBMITTALS**

- A. Samples: Submit samples of the following
  - 1. Each new exposed masonry material to be used for replacing existing materials. Include in each set of samples the full range of colors and textures to be expected in the completed Work.
  - 2. Sealant colors for selection
  - 3. Mortars, for each type to be used, prepared in aluminum or plastic channels, tinted, proportioned, tooled and finished as will be done for the finished work.
  - 4. Aggregate for mortar, including sieve analysis.
  - 5. Submit samples of each type of repair anchor.
- B. Manufacturer's Data
  - 1. Mortar materials: for information only, submit 2 copies of manufacturer's specifications and other data for each mortar material, including certification that each product complies with the specified requirements. Include instructions for storage, installation and protection. Indicate that installer has received a copy of each instruction.
- C. Control Submittals
  - 1. Submit a restoration program for each phase of the restoration process, including protection of surrounding materials on building and site during operations. Describe in detail the materials, methods, and equipment to be used for each phase of the restoration work.
- D. New Mortar Test
  - 1. To confirm compliance with specified mortar materials and mix, submit a test report on new mortars for each type of mortar specified.

2. Obtain samples from site mixed mortar batches being used for the work.
3. Label samples as to type (i. e. brick mortar, limestone mortar).
4. Test results shall state the proportion of aggregate, portland cement (if any), and lime in existing mortar, expressed as a ratio of components (“parts”).

E. Work Plan

1. Submit written work plan describing how work will be conducted. Include:
  - a. Schedule with milestones.
  - b. General approach to work, including work hours, staging, use of site, security, and sequencing.
  - c. Discription of means to be employed to maintain access and egress, and protect occupants and the public during construction.
  - d. Coordination with owner operations.
  - e. Personnel who will be executing the work, including resumés. Include superintendent’s name and contact information.
  - f. Describe tools and equipment to be used, and means and methods to be employed to carry out the work.
  - g. Mortar Removal: Provide description of measures that will be taken to practice means and methods and demonstrate that mortar removal power tools can be used reliably and consistently without damaging masonry materials. Include quality control program designed to demonstrate ability of operators to use tools without damaging masonry. Quality control program shall include provisions for supervising performance and preventing damage due to worker fatigue.

**1.6 QUALITY ASSURANCE**

A. A. Restoration Specialist

1. Engage an experienced masonry restoration firm that has specialized in the types of work required for this Project. Masonry restoration firm shall have a minimum of 10 years of experience with historic stone and brick masonry repointing and repairs, and as part of their bid shall submit examples of similar projects.

B. B. Field-Constructed Mockups

1. Prior to starting work, prepare the following sample panels on the building where directed by Architect. Prepare sample panels using same materials and methods proposed for the Work, and under same weather conditions to be expected during the restoration. Obtain Architect’s acceptance of visual qualities before proceeding with masonry restoration. Retain acceptable panels in an undisturbed condition, suitably marked, during construction as a standard for judging the completed Work.
  - a. Mortar Removal Mockup: prepare a mockup area approximately 900 mm (3 feet) high by 900 mm (3 feet) wide demonstrating methods and quality of workmanship expected in removing mortar from joints. Demonstrate proficiency with mortar removal tools, and ability not to damage adjacent brick or stone with tools. Provide one sample for brick and one for stone. Leave mockups unmortared for Architect’s approval. The following will be considered in evaluating mortar

removal mockups:

- i. Grinder damage: no grinder marks of any kind to existing stone or brick is permitted on visible surfaces of stone or within the joint on bedding faces. Unacceptable damage includes but is not limited to, but not limited to:
    - Chips
    - Gouges
    - Joint widening
    - Grinder drift
    - Overcutting at “T” joints into adjacent stones or bricks.
  - ii. Chisel Damage No damage from chisels is permitted. Unacceptable damage includes but is not limited to, but not limited to:
    - Chips
    - Gouges
    - Cracks
    - Spalls
- b. Repointing Mockup: Prepare a mockup area approximately 900 mm (3 feet) high by 900 mm (3 feet) wide each for stone and brick repointing, demonstrating methods and quality of materials and workmanship and finishing expected in repointing mortar joints. Obtain Architect’s approval prior to proceeding with remaining work.
  - c. Masonry Repair Mockup: Prepare sample panels of size indicated for each type of masonry material indicated to be patched, rebuilt, reset, or replaced. Erect sample panels into an existing wall, unless otherwise indicated, to demonstrate the quality of materials and workmanship.
2. Notify Architect one week in advance of dates and times when mockups will be prepared.

#### **1.7 DELIVERY, STORAGE AND HANDLING**

- A. Carefully pack, handle, and ship masonry units and accessories strapped together in suitable packs or pallets, or in heavy -duty cartons. Unload and handle to prevent chipping and breakage.
- B. Deliver mortar materials to the Project site in their original unopened containers bearing label identifying manufacturer’s name and brand and store under cover in a dry place to prevent absorption of water or intrusion of foreign matter.
- C. Manufactured mortars, adhesives and grouts shall contain hallmarks certifying compliance with reference standards and be types recommended by stone manufacturer for application.
- D. Prepared portland cement mortar and grout, shall be in sealed, moisture-proof, containers.
- E. Store materials in their original containers, clear of ground and under cover in a manner that will prevent damage and staining.

## 1.8 PROJECT CONDITIONS

- A. Building Occupancy:
  - 1. This building is a public facility. The building will be fully occupied, operational, and accessible to the public and during the work. Employ measures to maintain access and egress, and protect maintain public safety during the duration of the work.
- B. Environmental Requirements
  - 1. Protect mortar materials and accessories from weather, moisture, and contamination with earth and other foreign materials.
  - 2. Cold weather conditions
    - a. Perform all masonry construction so the in-wall components will not be below 7 degrees C (45 degrees F) for a minimum of 24 hours after placement.
    - b. Do not use frozen materials or materials mixed or coated with ice or frost. Do not lower the freezing point of mortar by use of admixtures or anti-freeze agents, and do not use calcium chloride in mortar or grout.
  - 3. Comply with minimum temperature recommendations of manufacturers for bonding and grouting materials other than portland cement.

## PART 2 - PRODUCTS

### 2.1 MASONRY MATERIALS

- A. Face Brick: Where brick removal and resetting is indicated, reinstall existing brick removed from the area. No new brick is anticipated, but if brick is damaged and not reusable, the following applies:
  - 1. West Façade: Salvaged brick from this building. Source: Remove brick from façade returns at the west corners of the north or south façade matching the front façade brick. to use as replacements in exposed areas. Obtain Architect's approval on location for removal. Replace brick in removed areas with new brick (see below).
  - 2. North, south and east façades: Use new common brick, ASTM C216, Grade SW, Type FBX, minimum compressive strength of individual unit 34.5 MPa (5000 psi).
    - a. Size, texture, General appearance, and color: match brick on existing building.
  - 3. Brick to replace removed and salvaged brick: ASTM C216, Grade SW, Type FBX, minimum compressive strength of individual unit 34.5 MPa (5000 psi), extruded.
    - a. Size, texture, General appearance, and color: match brick on existing building.

### 2.2 MORTAR MATERIALS

- A. Portland Cement
  - 1. ASTM C 150, Type I or Type II.
  - 2. Provide nonstaining white cement complying with staining requirement of ASTM C 91 for not more than 0.03 percent water-soluble alkali.
- B. Hydrated Lime: ASTM C 207, Type S.

- C. Aggregate for Mortar
  - 1. ASTM C-144 sand.
  - 2. Colored mortar aggregate: natural or manufactured sand selected to produce mortar color determined by the mortar analysis.
    - a. For pointing mortar, provide sand with rounded edges.
    - b. Match size, texture, and gradation of existing mortar as closely as possible.
- D. Colored Mortar Pigment: Any combination of the following:
  - 1. Natural and synthetic iron oxides and chromium oxides, compounded for mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.
  - 2. Stone Dust.
- E. Water
  - 1. Clean, free of oils, acids, alkalis, and organic matter.
- F. Masonry Cements, Masonry Mortars, Mortar Cements
  - 1. Not permitted
- G. Pre-mixed mortar: Factory blended mortars consisting of only portland cement, lime and aggregates, and tinting agents, mixed in the proportions specified in this specification are permitted. Provide manufacturers written certification of mix proportions, and mark blended mortar bags with mix proportions.
- H. Aggregate for Grout
  - 1. ASTM C404.

### **2.3 MORTAR MIXES**

- A. Measurement and Mixing
  - 1. Measure cementitious and aggregate material in a dry condition by volume or equivalent weight. Do not measure by shovel, use known measure. Mix materials in a clean mechanical batch mixer.
- B. Mixing Pointing Mortar
  - 1. Thoroughly mix cementitious and aggregate materials together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 1 to 2 hours. Add remaining water in small portions until reaching mortar of desired consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- C. Colored Mortar
  - 1. Produce mortar of color required by using selected ingredients. Do not adjust proportions without Architect's approval.
- D. Colored Mortar Pigment

1. Where colored mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.
- E. Do not use admixtures of any kind in mortar, unless otherwise indicated.
- F. Pointing and Rebuilding Mortar: The mortar mix below has been determined by laboratory analysis of the historic mortar from the building to match the physical characteristics of the historic mortar:
  - 1 part lime putty or hydrated lime.
  - 1 part white portland cement.
  - 8 parts sand.
- G. Add colored mortar pigment and/or stone dust to produce mortar color required.
  1. Where stone dust is used, it should be treated as part of the aggregate's volume during proportioning.
  2. The percentage of colorant pigments should no exceed 5% of the cementitious weight.
- H. Grout: ASTM C476.

## **2.4 MISCELLANEOUS MATERIALS**

- A. Masonry Veneer Ties
  1. Acceptable Manufacturer: Heckmann Building Products Inc. Other products may be acceptable subject to compliance with standards set forth by the specified product.
    - a. Heckman No. 260 Corrugated Wall Tie, stainless Steel 16 gage, 7/8" wide x 7" long, with 2 clear punched holes.
- B. Helical repair anchors:
  1. Acceptable Manufacturer: Helifix
- C. Lead Joint Caps
  1. Weathercap, by Weathercap, Inc., P.O. Box 1776, Slidell, LA, 70459, Phone: 985-649-4000.
    - a. Provide multiple widths to accommodate varying joint widths.
    - b. Provide Flat Cap Type A for flat joints and Cove Cap Type B for corner joints.
- D. Steel Lintel Head Joint Weeps
  1. Masonry Technology Incorporated (MTI) Head Joint Weep HJW 3845.
- E. Joint Materials
  1. Joint filler for copings: expanded closed cell polyethylene.
- F. Non-Shrink Grout
  1. A factory premixed and packaged non-metallic compound complying with

ASTM C1107, Grade C, at all flow levels, and one of the following, or as approved:

Dayton Superior Corp. "Sure-Grip High Performance Grout"  
Euclid Chemical Co. "Hi-Flow Grout"  
Master Builders, Inc. "Masterflow 928"  
L & M Construction Chemicals, Inc. "Crystex".  
Symons Corp. "Symons Multi-Purpose".

G. Sealant:

1. Joints in walls, and at window perimeters: Tremco Vulkem 116: one-part moisture curing, gun grade polyurethane sealant.
2. Joint between pavement and building: Tremco Vulkem 45SSL: one-part moisture curing, low modulus, pourable polyurethane sealant.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. Review work areas. Report any unusual conditions or conditions that differ from those indicated on the contract documents to the Architect.
- B. Do not proceed with the work until discrepancies or differences are resolved or corrected.

**3.2 PREPARATION**

- A. Mockups
  1. Execute practice joint removals and mockups as specified in this section prior to commencing work. Demonstrate operator proficiency in use of power tools without damaging brick or stone. Obtain architects approval of mockups prior to starting remainder of work.
- B. Protection
  1. Protect the work and adjacent work and materials against damage during progress of the work until completion.

**3.3 REPOINTING MASONRY**

A. Use of Power Tools

1. Use of power tools is permitted in combination with non-powered hand tools, provided that in the judgment of the Architect, the contractor's work plan, quality control program, and mockups have demonstrated the ability of operators to use tools without damaging masonry.
2. Damaged materials are to be replaced by the contractor at no expense to the owner.
3. Supervise operators' workmanship and monitor performance to prevent damage due to worker fatigue.
4. Practice techniques in concealed areas to develop proficiency before proceeding to visible areas.
5. Do not work when fatigued.

B. Rake out joints as follows:

1. Repointing: Rake out mortar from joints to depths equal to 2-1/2 times their widths but not less than 13 mm (1/2 inch) nor less than that required to expose sound, unweathered mortar.
2. Deep Repointing: Rake out mortar from joints to depths equal to not less than 51 mm (2inches), or deeper if required to expose sound, unweathered mortar.
3. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
4. Do not spall edges of masonry units or widen joints. Replace damaged masonry units.
5. Do not overcut or widen joints, or cut into bedding faces or masonry units.
6. Use power-operated rotary hand saws and grinders in accordance with the contractor's approved quality control program and adhering to techniques and results demonstrated in approved mockups to prevent damage to masonry.
7. Supervise operators' workmanship and monitor performance to prevent damage due to worker fatigue.
8. Brick Mortar Removal:
  - a. The following are guidelines. Contractor may propose alternative approaches that can be demonstrated to consistently provide equivalent results, and no damage to stone or brick.
  - b. Cut out center 1/3 of joints with hand-held circular flat-blade grinder.
  - c. Cut remaining mortar with a hand or small power chisel.
  - d. Finish corners at "T" joints with a small, non-powered hand chisel. Do not cut ends "T" joint ends with a grinder.
  - e. Where mortar is tightly adhered to stone, it is not necessary to remove all traces of mortar. A thin layer of tightly-adhered mortar (1/32" – 1/16") may remain to avoid damaging bricks.
9. Stone Mortar Removal:
  - a. Where joints are wide, follow procedures for brick mortar removal above.
  - b. Where joints are narrow, Cut out joints with hand-held circular flat-blade grinder. Do not use a thick blade to cut joints in a single pass. Use thin blades in multiple passes.

- c. Do not allow grinder to drift or catch.
- d. Finish corners at “T” joints with a small, non-powered hand chisel. Do not cut ends “T” joint ends with a grinder.
- e. Where mortar is tightly adhered to stone, it is not necessary to remove all traces of mortar. A thin uniform layer of tightly-adhered mortar (1/32”–1/16”) may remain to avoid damaging stones.

C. Point joints as follows:

- 1. Rinse masonry joint surfaces with water to remove dust and mortar particles. Time the rinsing application so that at the time of pointing excess water has evaporated or run off and joint surfaces are damp but free of standing water.
- 2. Apply mortar with a pointing tool. Bagging or gun applications are not permitted.
- 3. Apply the first layer of pointing mortar to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 10 mm (3/8 inch) until a uniform depth is formed. Compact each layer thoroughly and allow it to become thumbprint hard before applying the next layer.
- 4. After joints have been filled to a uniform depth, place remaining pointing mortar in three layers with each of first and second layers filling approximately two fifths of joint depth and third layer the remaining one fifth. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing bricks have rounded edges recess final layer slightly from face. Take care not to spread mortar over edges onto exposed masonry surfaces, or to featheredge mortar.
- 5. When mortar is thumbprint hard, tool joints to match original appearance of joints, unless otherwise indicated. Remove excess mortar from edge of joint by brushing.
- 6. Brush joints to match appearance of existing weathered joints.
- 7. Cure mortar by maintaining in a damp condition for not less than 72 hours.
- 8. Where repointing work precedes cleaning of existing masonry, allow mortar to harden not less than 30 days before beginning cleaning work.

### 3.4 LEAD CAPS AT CORNICES

- A. Provide lead caps embedded in sealant only on sky facing cornice joints where indicated. Do not apply sealant and lead caps on vertical joints on face of cornice. Repoint vertical joints with mortar.
- B. Raking out joints:
  - 1. Follow provisions in 3.3 – Repointing Masonry above, for Use of Power Tools and Raking Out Joints, in addition to the following provisions.
  - 2. Proceed with raking out joints with caution. Do not cut dowels or ties between coping stones.
- C. Provide backer rods and sealant in sky-facing cornice joints of stones. Do not permit sealant to set until lead caps are installed.
- D. Lead Joint Caps
  - 1. Where indicated, provide lead joint caps.

- a. Provide Flat Cap Type A for flat joints.
2. Select cap width in accordance with manufacturer's recommendations. Select width to cover widest portion of joint.
3. Set lead joint caps in uncured sealant, in accordance with manufacturer's instructions.
4. Install only on sky-facing joints only. Do not install on vertical joints. Extend lead caps ½" onto vertical faces and hammer tight to conform with edge profile.

### **3.5 BRICK REMOVAL AND REBUILDING**

- A. Carefully remove by hand, at locations indicated, bricks that are damaged, spalled, or deteriorated. Cut out full units from joint to joint and in a manner to permit replacement with full-size units.
  1. Call for Architect inspection of substrate at removed areas.
- B. Support and protect masonry indicated to remain that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.
- C. Salvage as many whole, undamaged bricks as possible.
- D. Remove mortar, loose particles and soil from salvaged brick by cleaning with brushes and water. Store brick for reuse.
- E. Clean remaining brick at edges of removal areas by removing mortar, dust, and loose debris in preparation for rebuilding.
- F. Install salvaged brick to replace removed brick. Use new brick only where approved by Architect. Fit replacement units into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
  1. Openings and Infills
    - a. Do not expose sawcut or broken edges. Tooth new work into existing.
    - b. At infills of existing brick openings, tooth brick into existing work using full stretchers and headers, unless otherwise indicated.
- G. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet clay bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 grams per 0.19 sq. m (30 sq. in.) per minute. Use wetting methods that ensure units are nearly saturated but surface dry when laid. Maintain joint width for replacement units to match existing units.
- H. Head Joint Weeps
  1. Install over flashing
  2. Place Head Joint Weep every 16" or in every other head joint of brick.
  3. Keep weep free and clear of mortar.
- I. Masonry Veneer Ties
  1. Attach using Tapcon fasteners or equal. Use two fasteners per tie.

2. Bend tie as close as possible to bottom fastener.
  3. Cut outer end of tie to be minimum 1/2" behind tooled mortar joint.
- J. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
- K. Point new mortar joints in repaired area to comply with requirements for repointing existing masonry, and rake out mortar used for laying brick before mortar sets.

### **3.6 CLEANING**

- A. Clean masonry by dry brushing at end of each days work, to remove mortar spots and droppings. Use clean water spray and stiff nylon or bristle brush to supplement cleaning. Detergent cleaners designed for masonry cleaning may be used on stubborn stains/
- B. Do not use acid based cleaners.
- C. Do not use wire brushes, metal scrapers, or any cleaning aid that would scour or abrade bricks or stone.

**END OF SECTION**