REQUEST FOR PROPOSAL

2017 Masonry Restoration
Line Creek Elementary School
Lakeview Middle School

Detailed Proposal Information is Available on District Website
http://www.parkhill.k12.mo.us

Bid Closing Date: March 14, 2017

Bid Closing Time: 1:00 p.m.

Park Hill School District reserves the right to reject any or all proposals and to waive informalities or irregularities in any proposal.
February 27, 2017

Dear Contractor:

The Park Hill School District (District) is seeking proposals from qualified contractors (Contractor) for masonry restoration at Line Creek Elementary School and Lakeview Middle School.

A mandatory pre-bid meeting and walk through of schools will start at Lakeview Middle School located at 6720 NW 64th Street, Kansas City, MO 64151 on March 7, 2017 at 1:00pm. The school sites will be visited for clarification and measurements.

Sealed proposals will be received by the Director of Operations at the Support Services office located at 8500 NW River Park Drive, Pillar 116, Parkville, MO 64152 on March 14, 2017 at 1:00pm.

Proposals must be returned on the form(s) provided, with “Bid Proposal – Masonry” clearly on the label. A proposal must consist of all pages of the proposal request including the signature page signed by an authorized representative of the firm. Non-conformance with these instructions may be grounds for rejection of proposal.

The District reserves the right to reject any and all proposals and to waive informalities.

Sincerely,

Jim Rich
Director of Operations
Park Hill School District

Project Manual

Masonry Restoration

Line Creek Elementary

and

Lakeview Middle School

February 27, 2017

Jim Rich
Director of Operations
8500 NW River Park Drive
Kansas City, Missouri 64152
DOCUMENT 00010 - TABLE OF CONTENTS

DIVISION 00 BIDDING REQUIREMENTS AND CONTRACT FORMS
Section 00010 Table of Contents
Section 00101 Invitation to Bid
Section 00201 Instructions to Bidders
Section 00411 Bid Form

DIVISION 1 - GENERAL REQUIREMENTS
Section 01100 Summary
Section 01700 Execution Requirements
Section 01731 Cutting and Patching
Section 01732 Selective Demolition
Section 01770 Closeout Procedures

DIVISION 2-3 - (NOT APPLICABLE)

DIVISION 4 – MASONRY
Section 04901 Masonry Restoration and Waterproofing

DIVISION 5-6 - (NOT APPLICABLE)

DIVISION 7 - THERMAL AND MOISTURE PROTECTION
Section 07920 Joint Sealants

DIVISION 8-16 - (NOT APPLICABLE)

DRAWINGS

END OF DOCUMENT 00010
DOCUMENT 00101 – INVITATION TO BID

PROJECT: 2017 Masonry Restoration

LOCATION: Line Creek Elementary and Lakeview Middle School

OWNER: Park Hill School District

The Owner will receive sealed bids until the bid time and date at the location given below for the following Work:

2017 Masonry Restoration at Line Creek Elementary and Lakeview Middle School

BID SUBMITTAL AND BID SECURITY
The Owner will consider bids as listed above, prepared in compliance with the Instructions to Bidders issued by the Owner, and delivered as follows:
Bid Date: March 14, 2017
Bid Time: 1:00 p.m., local time
Location: Bids shall be hand delivered to:
Attn: Mr. Jim Rich
Director of Operations
Park Hill School District
8500 NW River Park Drive
Pillar 116
Kansas City, Missouri 64152

Bids will be thereafter publicly opened. The Owner reserves the right to reject any and all bids and to waive minor informalities and irregularities.

PRE-BID CONFERENCE
A pre-bid conference for all bidders will be held at Lakeview Middle School, 6720 NW 64th Street, Kansas City, Missouri 64151 on March 7, 2017 at 1:00 P.M., local time. All prospective bidders are required to attend.

DOCUMENTS
Bidding documents may be obtained during the pre-bid. Documents will be provided to prime bidders only; only complete sets of documents will be issued.

TIME OF COMPLETION
Bidders shall begin work upon receipt of Notice to Proceed and to complete the work within the Contract Time indicated in the Contract Documents.

BIDDER’S QUALIFICATIONS
Bidders must be properly licensed under the state laws governing their respective trades and be able to obtain insurance and bonds required for the Work.

END OF DOCUMENT 00101
DOCUMENT 00201 – INSTRUCTIONS TO BIDDERS

1.1 ADVERTISEMENT FOR BIDS

A. An Invitation to Bid, published as a separate document, is part of these instructions.

1.2 DEFINITIONS

A. Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bids, these Instructions to Bidders, Notice To Bidders, Bid Form, Roofing Material Quantity List, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract, Drawings, Specifications, and all Addenda issued prior to execution of the Contract.

B. Addenda are written or graphic instruments issued by the Owner prior to the execution of the Contract that modify or interpret the Bidding Documents.

C. The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

D. An Alternate Bid is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

E. A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work as described in the Bidding Documents.

F. A Bidder is a person or entity who submits a Bid to the Owner and who meets the requirements set forth in the Bidding Documents.

1.3 BIDDING DOCUMENTS

A. Obtaining Bidding Documents: Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement for Bids in the number and for the cost or deposit sum, if any, stated therein. Bidders shall use complete sets of Bidding Documents in preparing Bids. The Owner assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

B. Examination of Bidding Documents and Site: Before submitting a bid, the Bidder shall carefully examine the drawings, read the specifications and all other Contract Documents and visit the site of the Work. The Bidder shall fully inform himself prior to bidding as to all existing conditions and limitations under which the Work is to be performed and he/she shall include in the Bid a sum to cover the cost of all items necessary to perform the Work as set forth in the Contract Documents. No allowance will be made to the Bidder because of lack of such
examination or knowledge. The submission of a bid shall be construed as conclusive evidence that the Bidder has made such examination.

C. Interpretation or Correction of Bidding Documents: If the Bidder is in doubt as to the interpretation of any part of the Bidding Documents, or finds discrepancies in or omissions from any part of the Contract Documents, he/she must submit a written Request for Interpretation thereof not later than 7 days prior to opening of bids. Address all communications to the Owner.

1.4 ADDENDA

A. Any interpretation, correction to, or addition to the Contract Documents will be made by written Addendum and will be delivered by mail or fax to each prime Bidder of record and the plan services indicated in the Advertisement for Bids. The written Addenda constitute the only interpretations of the Contract Documents; the Owner accepts no responsibility for any other claimed interpretations.

B. It is the responsibility of each Bidder to verify that he/she has received all Addenda prior to submitting a bid. It is also the responsibility of each Bidder to verify that all sub-Bidders and material suppliers whose prices are incorporated in the Bidder’s bid are familiar with the Bidding Documents in their entirety, including all Addenda issued up to the time of bid opening.

C. In the event a conflict or omission is discovered in the Bidding Documents after the issuing of the last addendum such that an interpretation cannot be issued by the Owner prior to bidding, the Bidder is directed to estimate on and provide the quantity and quality of material and labor consistent with the overall represented work so as to provide all materials, equipment, labor, and services necessary for the completion of the Work.

1.5 SUBSTITUTIONS DURING BIDDING

A. Substitutions are not allowed during bidding. Bids shall be submitted based upon the materials, equipment, and services specified.

1.6 BIDDING PROCEDURES

A. Form Of Bid
   1. Bids must be submitted on the Bid Form provided, properly executed and with all items filled out in ink or typed. Do not change or add words to the Bid Form. Unauthorized conditions, limitations, or provisions on or attached to the Bid Form may be cause for rejection of the bid. Bidder’s information on the Bid Form that is altered by erasure or by interlineation prior to submittal must be initialed and explained by notation on the Bid Form above the signature of the Bidder. All signatures must be witnessed.

B. Submission Of Bids
   1. Each bid shall be delivered to the location indicated on the Bid Form on or before the day and hour set for receipt and opening of bids. Each bid shall be submitted in an opaque, sealed envelope marked in the lower left-hand corner as follows:

   Bid for (name of prime contract)
INSTRUCTIONS TO BIDDERS

Name of Project
Bidder's Name
Bidder's Address
Contractor's License No.
Date and Time of Bid Opening

2. If not delivered in person, this envelope shall be enclosed in a second envelope for posting to the location indicated for receipt of bids. This envelope shall be addressed as follows:

Bid for (name of prime contract)
Owner name
Street address OR Post Office Box 0000
City Name, State, Zip Code
Contractor's License No.
Date and Time of Bid Opening

3. It is the sole responsibility of the Bidder to see that his/her bid is received in proper time. No bids submitted after the time fixed for receiving bids will be considered; late bids will be returned to the Bidder unopened.

C. Acknowledgement Of Addenda
1. Bidder must acknowledge all Addenda received in the spaces provided on the Bid Form. By submitting a bid, Bidder indicates that all considerations issued by addendum are incorporated in the bid.

D. Status Of Bidders
1. Proprietors submitting bids shall indicate their status as proprietors.
2. Bidders submitting bids for partnerships shall indicate their status as partners and shall submit, upon request of the Owner within 24 hours following receipt of bids, a certified copy of the power of attorney authorizing the executor of the bid to bind the partnership.
3. Bidders submitting bids for corporations shall indicate their status as corporations and shall submit, upon request of the Owner within 24 hours following receipt of bids, a certified copy of the board of directors’ authorization for the Bidder to bind the corporation and shall affix the corporate seal on the bid.
4. Bidders shall provide, upon request of the Owner, within 24 hours following receipt of bids, the following:
   a. Names and addresses of proprietors, of all members of a partnership, or of the corporation’s officers.
   b. Name of county or state where the partnership is registered or where the corporation is incorporated. Corporations must be licensed to do business in the project state at the time of executing the contract.

1.7 MODIFICATION AND WITHDRAWAL OF BIDS

A. A bid may be withdrawn on personal requests received from Bidder prior to submission time. A withdrawn bid may be resubmitted up to submission time. Negligence or error on the part of the

INSTRUCTIONS TO BIDDERS

00201 - 3
Bidder in preparing his/her bid confers no right for withdrawal of the bid after it has been opened.

B. Telegraphic and faxed bids will not be considered.

C. No Bidder may withdraw a bid within 60 days following the opening of bids.

1.8 AWARD OR REJECTION OF BIDS

A. The contract, if awarded, will be awarded to the lowest responsible Bidder, subject to the Owner's right to reject any or all bids and to waive any informality in the bids or in the bidding. Failure to complete all information required on the Bid Form and Bid Form Supplements, may result in rejection of bid. The Owner shall have the right to accept alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low bidder on the basis of the sum of the Base Bid and Alternates accepted.

B. Bids may be rejected if the Bid Form shows any unexplained erasures, omissions, alterations of form, additions not called for, added restrictions or qualifying conditions or other irregularities of any kind.

C. The Owner may make such investigations as he/she deems necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner all such information for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein within the Contract Time.

1.9 ACCEPTANCE

A. The acceptance of a bid will be a Notice of Award, signed by a duly authorized representative of the Owner; no other act by the Owner or his/her agents shall constitute the acceptance of a bid. The acceptance of a bid by the Owner shall bind the successful Bidder to execute the contract. The Bidder to whom the contract is awarded by the Owner, shall, sign and deliver to the Owner for execution by the Owner all required copies of the Agreement, along with all required insurance and bonding documents. The rights and obligations provided for in the Contract shall become effective upon the parties only with formal execution of the Agreement by the Owner.

1.10 BONDS AND CERTIFICATES

A. Bid shall be accompanied by an acceptable bid bond or certified cashier's check drawn on a local bank, payable to Treasurer, Board of Education, for an amount not less than five percent of the total amount of the bid. This bid security shall become the property of the Board of Education as liquidated damages in the event the successful bidder fails to execute and deliver a contract, along with specified surety and statutory bonds, within ten days after the received notice of the acceptance of his bid by the Board of Education.
B. Bidder shall deliver to the Owner, upon receipt of contract or purchase order, a Performance Bond, a Payment Bond, and a Labor and Material Bond, each in the amount of 100 percent of the Contract Sum, with a corporate surety authorized to transact business in the Project State, within 3 days following execution of the Contract, or prior to commencement of the Work, whichever occurs first. Attorneys-in-fact who sign bonds must file with each bond a certified and effective dated copy of their power of attorney.

C. Satisfactory certificates of insurance in the amounts specified in the Contract Documents shall be furnished prior to commencement of Work.

D. All bonds and policies or certificates of insurance must meet with the approval of the Owner before the Contractor will be allowed to commence the Work. Failure or refusal to furnish bonds or insurance policies or certificates in a form satisfactory to the Owner shall subject the Bidder(s) to forfeiture of bid bond.

E. The form of the Agreement that the successful Bidder, as Contractor, will be required to execute is the form of Agreement referenced in the Project Manual.

1.11 INVOICING AND OFFICE SUPPORT

A. All bidders must have the ability within their office to process all required paperwork for invoicing the District. This is to include, but not be limited to, timely issuance of invoices with proper backup to support the amount due, certified payrolls/reports, and all required closeout documents.

1.12 PREVAILING WAGE AND CERTIFIED PAYROLL REQUIREMENTS

A. This project shall be deemed as a prevailing wage project and all necessary documentation shall be included, but not limited to weekly certified payrolls which are to be addressed to Jim Rich, Director of Operations, 8500 NW Riverpark Drive, Kansas City, Missouri 64152, for the entire length of the work under this contract.

B. This project shall abide to any/all prevailing wage rates for the State of Missouri. All requirements for latest published prevailing wage standards shall be the responsibility of the bidding firm.

END OF SECTION 00201
DOCUMENT 00411 – BID FORM

Park Hill School District
2017 Masonry Project
Kansas City, Missouri

Bidder: __________________________________________

2017 Masonry Project (Bidder enter name here)

BASE BID, SINGLE-PRIME (ALL TRades) CONTRACT

The undersigned Bidder, having carefully examined the Bidding and Contract Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, all as issued by the Owner, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services as described in the above documents, without exception, including all scheduled Allowances if any, necessary to complete the construction of:

Single Prime (All trades) Contract for the above-named Project, in accordance with the requirements of the Bidding Documents, for the sum of:

BASE BID

1. Line Creek Elementary – Exterior Masonry Wall Restoration $_________________________

2. Lakeview Middle School – Exterior Masonry Wall Restoration $_________________________

UNIT PRICES

1. Brick Replacement $________________ per Brick

2. Tuck-pointing $________________ per Lin. Ft.

BONDING

The undersigned Bidder agrees to furnish a Payment & Performance Bond in the amount of 100% of total contract value.

TIME OF COMPLETION

The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified and shall fully complete 100% of the Work no later than July 30, 2017. If work cannot be completed by July 30, 2017, contractor shall pay as a late fee the sum of $1,000.00 for each consecutive working day that the work is not completed thereafter.
ACKNOWLEDGEMENT OF ADDENDA
The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
Addendum No. 1, dated ______________
Addendum No. 2, dated ______________

CONTRACTOR'S LICENSE
The undersigned further states that he is a duly licensed Contractor, for the type of work proposed, in the State of Missouri, and that all fees, permits, etc., pursuant to the submission of this proposal have been paid in full.

SUBMISSION OF BID
Respectfully submitted this ____ day of ___________, 2017.

By: ________________________________
   (Name of bidding firm or corporation)

Witness:
By: ________________________________
   (Signature)

Attest: ______________________________
   (Signature)

By: ________________________________
   (Type or print name)

Title: ______________________________
   (Owner/Partner/President/Vice Pres.)

Address: ____________________________

Title: ______________________________
   (Corporate Secretary or Assistant Secretary Only)

Phone: ______________________________
Licenses: ____________________________
Federal ID No.: _______________________

(Affix Corporate Seal Here)
SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Work covered by the Contract Documents.
   2. Type of Contract.
   3. Use of premises.
   4. Owner's occupancy requirements.
   5. Work restrictions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Masonry Restoration Project

B. Project Location: Line Creek Elementary and Lakeview Middle School

C. Owner: Park Hill School District
   1. Owner's Representative: Randy Reuter

D. The Work consists of the following:
   1. General
      a. Set-up necessary safety protection including OSHA warning lines and guard rail systems as required while working on roofs.
      b. Comply with new OSHA silica dust standard after new standard takes effect on June 1, 2017.
      c. Provide mortar mock-up as required by District and Tremco and to be approved by both.
      d. Provide protection of roof areas, windows, doors, and any other items or areas that may be damaged from mobilization, work, and or installation of new products.
      e. Replace all spalled and cracked brick.
         1) Replacement bricks shall be approved by District prior to start of each project.
      f. Cut and point miscellaneous areas of all mortar joints.
g. Clean, prime, and seal miscellaneous holes and voids in brick and mortar joints.

h. Clean, prime, and install new sealant around all projections extending through walls.

i. Clean, prime, and seal all vertical and horizontal caulking joints.

j. Sand-pointing shall include matching new sand color to existing brick and mortar colors.

2. Work areas consist of all exterior brick walls.

a. Remove all existing sealant material in vertical and horizontal control joints.
   1) Clean joints of all dirt, dust, and debris.
   2) Prime joints with Tremco Primer No. 171.
   3) Install new backer-rod with 35% compression.
   4) Install TremSeal HP sealant and properly tool.

b. Rout out all movement joints in brick to provide smooth edges.
   1) Clean joints of all dirt, dust, and debris.
   2) Prime joints with Tremco Primer No. 171.
   3) Install new backer-rod or bond-breaker tape.
   4) Install TremSeal HP sealant and properly tool.
      a) Minor cracks, 1/8" or small, extending through bricks shall be sand-pointed to match brick color.

c. Miscellaneous tuck-pointing shall be completed at any and all mortar joints throughout the walls where hairline cracks larger than 1/32 are observed.

d. At all projections including but not limited to windows, light fixtures, water spickets, and doors frames, remove all sealant and glazing.
   1) Clean joints of all dirt, dust, and debris.
   2) Prime brick with Tremco Primer No. 171.
   3) Prime metal components with Tremco Tremprime Non-Porous Primer.
   4) Install new backer-rod or bond-breaker tape in all joints.
      a) Backer-rod shall provide 35% compression.
   5) Install TremSeal HP sealant and properly tool.
   6) Install TremSeal S sealant at window mullion’s and properly tool.

e. After all wall repairs and preparation has been completed and approved by the District and Tremco, install Tremco’s Decktite WDS Sealer over 100% of all vertical walls.

f. Line Creek Elementary
   1) Work to include all exterior walls including masonry walls above roof lines.
      a) Except the east end of the south elevation wall above Roof F, which will be completed with roofing project.
   2) Protect adjacent roof areas per Tremco requirements.
   3) Remove and reinstall all downspouts to complete work as specified.
      a) Downspouts shall be re-secured to wall using masonry anchors or fasteners approved by District and Tremco.
   4) Pressure wash all masonry and use cleaning chemicals as needed to remove all laitance, dirt, dust, debris, oil, grease, efflorescence, and alkali coatings.
   5) At all vertical and horizontal control joints, door and window perimeters, vents, metal to brick perimeter joints at applicable windows and doors, sidewalk to building joints, miscellaneous thru-wall penetrations, and any
miscellaneous wall penetrations:
   a) Cut-out 100% of existing perimeter sealant, clean, prime, prepare, and re-caulk joints.
6) Grind-out and tuck-point approximately 700 lineal feet of open/failed brick mortar joints on the main building and approximately 100 lineal feet on walls above the roof lines.
   a) Additional tuck-pointing shall be completed based on unit price.
7) Remove and replace 30 individual bricks.
   a) Additional brick replacement shall be completed based on unit price.
8) Remove old ladder on south end of building
9) Pressure wash all masonry and use cleaning chemicals as needed to remove all laitance, dirt, dust, debris, oil, grease, efflorescence, and alkali coatings.
10) Acid wash all masonry repair areas.
11) Install Decktite WDS Sealer over 100% of exterior masonry walls.

g. Lakeview Middle School
1) Work to include all exterior walls, except no EIFS repairs.
   a) Do include EIFS to masonry joints
2) Protect adjacent roof areas per Tremco requirements.
3) Remove and reinstall all downspouts to complete work as specified.
   a) Downspouts shall be re-secured to wall using masonry anchors or fasteners approved by District and Tremco.
4) At all vertical and horizontal control joints, door and window perimeters, vents, metal to brick perimeter joints at applicable windows and doors, sidewalk to building joints, miscellaneous thru-wall penetrations and any miscellaneous wall penetrations:
   a) Cut-out 100% of existing perimeter sealant, clean, prime, prepare, and re-caulk joints.
5) At one vertical angled joint that is cracked near the main entry; grind-out joint, install backer rod, and install Tremco HD sealant.
6) Remove and replace 10 deteriorated/cracked bricks.
   a) Additional brick replacement shall be completed based on unit price.
7) Pressure wash all masonry and use cleaning chemicals as needed to remove all laitance, dirt, dust, debris, oil, grease, efflorescence, and alkali coatings.
8) Grind-out and tuck-point approximately 400 lineal feet of open/failed brick mortar joints on the main building
   a) Additional tuck-pointing shall be completed based on unit price.
9) Acid wash all masonry repair areas.
10) Install Decktite WDS Sealer over 100% of the exterior masonry walls.
11) At north dumpster enclosure walls:
   a) Tuck point 100% of the exterior joints.
b) Replace 100 bricks on exterior walls.
c) Power-wash to clean all dirt, dust, and debris off exterior walls.
d) Install Decktite WDS Sealer over 100% of exterior masonry walls.
e) Remove existing cast stone caps, install new wood blocking over walls, install new 22-gauge pre-finished metal coping.
   i) New wood blocking shall be covered with roofing membrane.
   ii) New metal coping shall extend down over wood blocking a minimum of two-inches on all sides and ends.
   iii) New coping shall be attached to new wood blocking with grommeted on fascia.
f) Fill and repair all holes and voids on interior walls, power-wash and install:
   i) Solargard Masonry Primer.
   ii) Two coats of Solargard Hy-Build.

12) At two low sitting walls near front entry:
   a) Re-caulk all butt joints.
   b) Provide miscellaneous tuck-pointing.
   c) Power-wash to clean all dirt, dust, and debris off walls.
   d) Install Decktite WDS Sealer over 100% of masonry walls.

1.4 TYPE OF CONTRACT
   A. Project will be carried out under a single prime contract.

1.5 USE OF PREMISES
   A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
      1. Confine construction operations to selected roof areas.
      2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
      3. Driveways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
         a. Schedule deliveries to minimize use of driveways and entrances.
         b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

   B. Personnel Identification: All construction personnel in occupied portions of the facility must wear Contractor-furnished identification at all times. Personnel without proper identification are subject to removal from the site by the Owner.

   C. Security: Comply with Owner’s requirements related to security.

   D. Safety: Comply with all OSHA regulations and guidelines that apply to project.

   E. Use of Existing Building: Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.6 OWNER'S OCCUPANCY REQUIREMENTS
   A. Full Owner Occupancy: Owner will occupy site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize
conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours notice to Owner of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 6:00 a.m. to 5:00 p.m., Monday through Friday, except otherwise indicated.

1. Weekend Hours: only if authorized by owner in advance
2. Early Morning Hours: only if authorized by owner in advance
3. Hours for Utility Shutdowns: coordinate with owner

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.

1.8 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "MasterFormat" numbering system.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100
SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. General installation of products.
   2. Progress cleaning.
   3. Protection of installed construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produces harmful noise levels.

F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
   1. Allow for building movement, including thermal expansion and contraction.

G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
3.2 PROGRESS CLEANING

A. General: Clean Project site and work areas daily. Enforce requirements strictly. Dispose of materials lawfully.
   2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   1. Remove liquid spills promptly.

D. Concealed Work: Remove debris from concealed work prior to concealing with subsequent construction.

E. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.

H. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.3 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

3.4 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."
   1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.
C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

END OF SECTION 01700
SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS
A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 QUALITY ASSURANCE
A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety.
C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity that results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety.
D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
1.5  WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1  MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

   1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1  EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

   1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.

   2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2  PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3  PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
   a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
   b. Restore damaged pipe covering to its original condition.
   c. Provide an even surface of uniform finish, color, texture, and appearance.
   d. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
3. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01731
SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building or structure.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 SUBMITTALS

A. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.5 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
C. Standards: Comply with ANSI A10.6 and NFPA 241.

D. Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

1. Comply with requirements specified in Division 1 Section "Summary."

B. Notify Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities affected by the Work have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Owner.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
1. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."

B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Contractor shall arrange to shut off indicated services/systems when requested by Contractor.
2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
   a. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Division 1 Section "Temporary Facilities and Controls."

B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Protect items from damage during transport and storage.
3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Masonry: Refer to Division 4 Section “Masonry Restoration and Waterproofing” and Division 7 Section “Joint Sealants”.

B. Air-Conditioning Equipment: Remove equipment without releasing refrigerants.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 01732
SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Final completion procedures.
   2. Final cleaning.

1.3 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
   1. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
   2. Prepare and submit Project Record Documents, operation and maintenance manuals, and similar final record information.
   3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
   4. Complete final cleaning requirements.
   5. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
   6. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
   7. Instruct Owner's personnel in maintenance of products and systems.
   8. Inspection: Submit a written report of final inspection as specified in Division 7 masonry section(s).
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

1. Complete the following cleaning operations before Final Completion:

   a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
   b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
   d. Remove tools, construction equipment, machinery, and surplus material from Project site.
   e. Clean exposed exterior hard-surfaaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
   g. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
   h. Leave Project clean and ready for occupancy.

B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01770
SECTION 04901 - MASONRY RESTORATION AND WATERPROOFING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and contract documents, including Section 01100 SUMMARY, apply to this section.

1.02 SECTION INCLUDES

A. The requirements and application procedures for the restoration of existing clay masonry units.

1.03 RELATED SECTIONS

A. Section 01100 Summary
B. Section 07920 Joint Sealants

1.04 DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials:
   1. Deliver materials to job-site in new, dry, unopened and well-marked containers showing product and manufacturers name.
   2. Deliver materials in sufficient quantity to allow continuity of work.
   3. Coordinate delivery with project superintendent.

B. Do not order project materials or start work before receiving written notice from owner to proceed. No work shall commence without signed contracts.

C. Storage of Materials:
   1. Store materials marked “KEEP FROM FREEZING” in areas where temperatures will remain above 40° F.
   2. Do not store materials in open or in contact with ground or roof surface.
   3. Store all materials on a raised platform covered with secured canvas tarpaulin (not polyethylene), top to bottom. Cover all materials when project is not in progress and maintain the ability at all times to cover the materials when required, such as during an unanticipated rain shower.
   4. Subcontractor shall assume full responsibility for the protection and safekeeping of products stored on premises.
   5. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
6. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
7. Store lime putty covered with water in sealed containers.
8. Store sand where grading and other required characteristics can be maintained and contamination avoided.

1.05 ENVIRONMENTAL CONDITIONS

A. Environmental requirements:
1. Do not work in rain, snow, or in presence of water.
2. Do not work in temperatures below 40° F.
3. Do not install materials marked “KEEP FROM FREEZING” when daily temperatures are scheduled to fall below 40° F.
4. Do not perform masonry work below 40° F.
5. Remove any work exposed to freezing.
6. Coordinate with superintendent when volatile materials are to be used near air ventilation intakes so owner can use some or all of the following methods to minimize disruptions to building occupants and operations:
   a. Divert air intake from work area by attaching scoops or temporary ductwork.
   b. Temporarily shut down or block air intakes.
   c. Provide make-up air or intake air from sources away from work area.

1.06 FIELD QUALITY CONTROL

A. Periodic job-site quality control inspections shall be provided by the Project Facilitator during the progress of the work. The number of inspections shall be determined by the scope of work as well as the Contractor’s work progress.

B. Final Inspection and Approval:
1. Formal final inspection of completed work shall be made by representatives from Park Hill School District and Tremco.

C. Contractor shall correct installations or details noted as deficient during the Final Inspection within five (5) working days of notification.

1.06 WARRANTY

A. Installer’s Warranty
1. Contractor’s standard form in which the Contractor agrees to repair or replace any work including Tremco material that fail or do not comply with the performance and other requirements specified in the Section within specified warranty period.
2. Warranty Period: One (1) year from date of completion and acceptance by Park Hill School District.
B. Manufacturer’s Warranty
   1. Manufacturer agrees to furnish Tremco material that fails or does not comply with the performance and other requirements specified in this Section within specified warranty period.
   2. Warranty Period: One (1) year from date of completion and acceptance by Park Hill School District.

C. Warrantees specified in this Section exclude deterioration or failure of work from the following:
   1. Movement of the structure resulting in stresses on the work caused by structural settlement or errors attributable to original design or original construction.
   2. Disintegration of Tremco materials from natural causes exceeding design specifications.
   3. Mechanical damage caused by individuals, tools, or other outside agents.
   4. Changes in Tremco material appearances caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.01 GENERAL
   A. Comply with quality control, references, specifications, and manufacturer's data. Products containing asbestos are prohibited on this project. Use only asbestos-free products.
   B. Use products with personal protection. User must read container label and material safety data sheets prior to use.

2.02 MORTOR MATERIALS
   A. Masonry components:
      2. Masonry sand: ASTM C 144-93. Shall contain no more than 0.5% lightweight aggregate particles. Shall be free of coal, grains, wood, and other organic impurities. Shall be washed and free of expansive clay.
      3. Hydrated lime: ASTM C 207-91(1992), Type S, non-air-entrained. Do not use unslaked lime. Follow manufacturer's written hydration procedures if lime putty is used.
      6. Mortar coloring material: Inert, non-fading, alkali fast oxides, finely ground, made especially for cement/lime mortars, to match existing color. Color quantity no more than 6% by weight. Match existing color.
      7. Face brick: Use existing brick. If needed, new brick to match existing in sizes, texture, and color to Owner's satisfaction.
2.03 MASONRY SEALER
   A. Tremco Decktite WDS.

PART 3 - EXECUTION

3.01 EXAMINATION
   A. Verify conditions as satisfactory to receive work.
   B. Do not begin work until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions.

3.02 GENERAL WORKMANSHIP
   A. All work performed by subcontractor shall conform to this specification.
   B. The presence and activity of the manufacturer's representative, architect's representative, and/or owner's representative shall in no way relieve subcontractor of contract responsibilities or duties.
   C. Substrate temperature shall be within 50° F to 110° F for product application. At no time shall temperature exceed 110° F during application and cure.
   D. Tuck-pointing work as described herein shall not proceed at an ambient temperature below 40° F or above 95° F without prior written approval from the engineer.
   E. Tuck-pointing work shall not be performed during rain or inclement weather or when such weather is imminent.

3.03 MASONRY RESTORATION
   A. Perform masonry restoration work in the following sequence:
      1. Repair existing masonry, including replacing existing masonry with new masonry materials.
      2. Clean masonry surfaces.
      3. Point mortar joints.
      4. Apply water dispersed silane sealer.

3.05 TUCKPOINTING
   A. Prepare tuck-pointing areas using hand and/or power tools.
      1. Utilize hand tools only after test cuts determine no damage to masonry units will result.
      2. Do not damage masonry units.
B. Remove all mortar from joints to a depth of approximately 3/4". Remove any exposed cavity tie back steel from surface and loose brick.

C. When cutting is complete, remove loose particles present or resulting from grinding, chipping or raking by oil free compressed air or brushing.

D. Mix mortar:
   1. Use paddle batch mixer. Begin mixing by combining 3/4 of the needed water, all of the portland cement and hydrated lime and 2 of the sand.
      a. Mix for at least three and not more than five minutes. Gradually add sand, water, and mix to obtain uniform visual and physical characteristics. Mixed consistency, molded ball into hand.
   2. Use mortar after adding final water to bring to working consistency. Prehydrate mortar according to manufacturer’s directions if lime putty is used.
   3. Discard mortar not used within 2-1/2 hours of original mixing time.
   4. Retempering mortar with additional water is not permitted.

E. Dampen joints to be pointed.

F. Tuck repointing mortar into prepared joint in layers, tightly compress. Fill joint in this manner until full and surface is slightly recessed from brick face.

G. When surface layer is thumbprint hard, tool joints. Match the surface configuration of the existing mortar, or use a 5/8" rounded jointing tool forming concave joint. Avoid tool burn or slicking.

H. Clean excess material from all surfaces.

3.06 PRESSURE CLEANING OF WALL SURFACES

A. Wet wall and masonry surfaces with cold water applied by low-pressure spray (100 to 400 psi; 4 to 6 gpm).
   1. The water blast spray tip will create a 25 to 50 degree fan spray.

B. Apply mold, mildew, and algae remover by brush or low-pressure spray.
   1. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups of tetrasodium polyphosphate (TSPP), 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.

C. Scrub wall and masonry surfaces with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that wall surface remains wet.
3.07 GENERAL NOTES TO SCOPE OF WORK

A. Prior to application of masonry sealer, all structural movement cracks shall be routed out and filled with specified sealant.

B. Certain precautions need to be taken recognizing the work will take place in an active environment. Work being performed during normal working hours shall be carefully coordinated with Owner, and shall not be disruptive to their operations.
   1. All workers shall wear appropriate clothing at all times.

3.08 APPLICATION OF WATER DISPERSED SILANE SEALER

A. Repair masonry and/or repoint any loose or disintegrated mortar. Allow mortar to cure a minimum of 7 days prior to surface cleaning.

B. Alkali or efflorescence on the surface shall be treated with proper neutralizing compound as part of the surface cleaning procedure prior to surface cleaning. The surface shall be rendered to the satisfaction of sealer manufacturer.

C. All vertical surfaces must be cleaned prior to treatment to remove all laitance, dirt, and dust. Proper cleaning will be achieved by water blasting the surface of the substrate. The vertical wall will be allowed to dry a minimum of 72 hours @ 70°F and 50% R.H. Longer drying will be required at lower temperatures and higher humidities.

D. All sealant, glazing and painting work shall be fully cured prior to application of sealer.

E. Spray apply water dispersed silane sealer to masonry surface with 9:1 metered spray equipment and backpack provided by manufacturer.

F. Apply sealer from bottom to the top. The solution shall be uniformly sprayed to saturate/flood the surface. Proper quantities are being applied when the excess penetrating solution runs six (6) to eight (8) inches below the spray pattern. Coverage rates will vary for different substrates. Refer to manufacturer’s specification data sheet for coverage rates.

G. In the event that the applicator is unable to complete the entire application or drop at one time, the place where the application was stopped shall be clearly marked.

H. Water dispersed silane sealer is applied by specialized metered spray equipment from Tremco. Apply spray in one application until saturation occurs. Surfaces must be uniformly wet during application.
3.07 ADJUSTING AND CLEANING

A. Repair of deficiencies:
   1. Installations of details noted as deficient during final inspection must be repaired and corrected by applicator, and made ready for reinspection, within five (5) working days.

B. Clean-up:
   1. Immediately upon job completion, roof membrane, flashing surfaces, ground and surrounding areas shall be cleaned of debris.

END OF SECTION
SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and contract documents, including Section 01100 SUMMARY OF WORK, apply to this section.

1.02 SECTION INCLUDES

A. The requirements and application procedures for the installation of masonry tuck-pointing and sealant materials.

1.03 RELATED SECTIONS

A. Section 01100 Summary of Work

B. 04901 Masonry Restoration and Waterproofing

1.04 DELIVERY, STORAGE AND HANDLING

A. Delivery of Materials:
   1. Deliver materials to job-site in new, dry, unopened and well-marked containers showing product and manufacturers name.
   2. Deliver materials in sufficient quantity to allow continuity of work.
   3. Coordinate delivery with project superintendent.

B. Do not order project materials or start work before receiving written notice from the owner to proceed. No work shall commence without signed contracts.

C. Storage of Materials:
   1. Store materials marked “KEEP FROM FREEZING” in areas where temperatures will remain above 40° F.
   2. Do not store materials in open or in contact with ground or roof surface.
   3. Store all materials on a raised platform covered with secured canvas tarpaulin (not polyethylene), top to bottom. Cover all materials when project is not in progress and maintain the ability at all times to cover the materials when required, such as during an unanticipated rain shower.
   4. Subcontractor shall assume full responsibility for the protection and safekeeping of products stored on premises.
1.05 ENVIRONMENTAL CONDITIONS

A. Environmental requirements:

1. Do not work in rain, snow, or in presence of water.
2. Do not work in temperatures below 40° F.
3. Do not install materials marked “KEEP FROM FREEZING” when daily temperatures are scheduled to fall below 40° F.
4. Do not perform masonry work below 40° F.
5. Remove any work exposed to freezing.
6. Coordinate with superintendent when volatile materials are to be used near air ventilation intakes so owner can use some or all of the following methods to minimize disruptions to building occupants and operations:
   a. Divert air intake from work area by attaching scoops or temporary ductwork.
   b. Temporarily shut down or block air intakes.
   c. Provide make-up air or intake air from sources away from work area.

1.06 WARRANTY

A. Installer’s Warranty

1. Contractor’s standard form in which the Contractor agrees to repair or replace elastomeric joint sealants that fail or do not comply with the performance and other requirements specified in the Section within specified warranty period.
2. Warranty Period: One (1) year from date of completion and acceptance by Park Hill School District.

B. Manufacturer’s Warranty

1. Manufacturer agrees to furnish sealant to repair or replace material that fails or does not comply with the performance and other requirements specified in this Section within specified warranty period.
2. Warranty Period: One (1) year from date of completion and acceptance by Park Hill School District.

C. Warrantees specified in this Section exclude deterioration or failure of elastomeric joint sealants from the following:

1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer’s written specifications for sealant elongation and compression caused by structural settlement or errors attributable to original design or original construction.
2. Disintegration of joint substrates from natural causes exceeding design specifications.
3. Mechanical damage caused by individuals, tools, or other outside agents.
4. Changes in sealant appearances caused by accumulation of dirt or other atmospheric contaminants.
1.06 SITE CONDITIONS
   A. Existing Conditions
      1. Contractor shall be responsible to police his men to ensure all areas where his men
         are working are kept clean, neat, and orderly.
      2. At conclusion of job, an inspection will be done to satisfy Saint Luke’s that all
         areas of the building and grounds are in their original condition, or
         repaired/replaced to their original condition.
   B. Safety Requirements
      1. All application, material handling, and associated equipment shall conform to and
         be operated in conformance with OSHA safety requirements.
         a. The Contractor’s foreman shall have all applicable Material Safety Data
            Sheets on site and available for review at all times.
      2. Comply with Owners fire and safety requirements.

PART 2 - PRODUCTS

2.01 GENERAL
   A. Comply with quality control, references, specifications, and manufacturer's data. Products
      containing asbestos are prohibited on this project. Use only asbestos-free products.
   B. Use products with personal protection. User must read container label and material safety
      data sheets prior to use.
   C. One-part low modulus sealant joint size criteria:
      1. Minimum size of joint shall be four times the anticipated movement.
      2. Joint depth to be 1/4 inch (6mm) for joints 1/4 inch (6mm) to 2 inch (13mm) in
         width.
      3. Maximum joint size approximately 1 1/4" (32mm) width x 3/8" (9mm) depth in a
         single application.
   D. No material substitution will be allowed unless approved in advance by Owner. Owner
      shall be the sole judge as to whether materials or products do in fact, meet the established
      standard of quality.
   E. Compatibility: Provide joint sealants, backings, and other related materials that are
      compatible with one another and with joint substrates under conditions of service and
      application, as demonstrated by sealant manufacturer, based on testing and field
      experience.
2.02 SYSTEM COMPONENTS

A. Sealants:
   1. Multi-component, non-sag, polyurethane joint sealant, Tremco TremSeal HP.
      a. General purpose, vertical and horizontal grade.
      b. Color: As selected by owner.

B. Primer for sealants:
   1. Primer for concrete or masonry surfaces prior to applying urethane sealants:
      a. Tremco Primer No. 171.
   2. Primer for metal surfaces prior to applying urethane sealants:
      a. Tremco Metal Primer.

C. Joint-Sealant Backing:
   1. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on filed experience and laboratory testing.
   2. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
   3. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

D. Miscellaneous Materials:
   1. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in anyway, and formulated to promote optimum adhesion of sealants to joint substrates.
   2. Cleaner for Porous Surfaces: not to be used unless approved by the joint sealant manufacturer in advance.
   3. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Contractor and materials manufacturer’s representative present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
B. Do not begin work until all unsatisfactory conditions are corrected. Beginning work constitutes acceptance of conditions.

3.02 GENERAL WORKMANSHP

A. All work performed by subcontractor shall conform to this specification.

B. The presence and activity of the manufacturer's representative, architect's representative, and/or owner's representative shall in no way relieve subcontractor of contract responsibilities or duties.

C. Substrate temperature shall be within 50°F to 110°F for product application. At no time shall temperature exceed 110°F during application and cure.

3.03 SURFACE PREPARATION

A. The surface of joints to receive sealants shall be free of all frost, condensation and moisture. Oil, grease dirt, chalk, particles of mortar, dust, loose mill scale, caulking and other foreign substances shall be removed from surfaces of joints to be in contact with the sealant. Oil and grease shall be removed with solvent and surfaces shall be wiped dry with clean clothes. All surfaces shall be ground free of existing sealants, caulks and abraded to clean mortar or stone.

B. Remove loose particles present or resulting from grinding, abrading or blast cleaning by sweeping particles out with a dry brush, blowing out joints with oil free compressed air or by vacuuming joints prior to solvent cleaning.

C. Vertical surfaces must be cleaned of laitance, dirt, dust, oil, grease efflorescence, alkaline coatings and all other contaminants. Replace any loose, weak or soft mortar and allow 72 hours cure time prior to application.

D. Clean only as much area that can be primed, packed and caulked in a single day.

E. Joint Priming: Apply primer to comply with joint-sealant manufacturers written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.04 INSTALLATION OF BACKER-ROD MATERIAL

A. When using backup material comprised of tubular or rod stock, avoid lengthwise stretching of the material. Do not twist or braid backer material.
B. **Installation:** Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, tear, or puncture the exterior skin or surface of the backer material.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
4. For installation of backup material, provide a blunt-surfaced tool of wood or plastic, having shoulders designed to ride on the adjacent finished surface and a protrusion of the required dimensions to assure uniform depth of backup material below the sealant.
5. Do not, under any circumstance, use a screwdriver or similar tool for this purpose.
6. Using the approved tool, smoothly and uniformly place the backup material to the depth indicated on the drawings or otherwise required, compressing the backer material 25% to 50% and securing a positive fit. Do not insert the depth of the backer material beyond 1/2" (6 mm).

C. **Bond Breaker Tape:** Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears.

1. Remove tape immediately after tooling without disturbing joint seal.
2. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

3.05 **INSTALLATION OF SEALANTS**

A. **General:** Comply with joint-sealant manufacturer’s written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. **Sealant Installation Standard:** Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealants using proven techniques that comply with the following and at the same time backing is installed:

1. Place sealants so they directly contact the fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

D. Prior to start of installation of each joint; verify that the required proportion of width of joint to depth of joint ration has been secured.

1. One-part low modulus sealant joint size criteria:
   a. Minimum size of joint shall be four times the anticipated movement.
b. Joint depth to be 1/4 inch (6mm) for joints 1/4 inch (6mm) to 2 inch (13mm) in width.

c. Maximum joint size approximately 1 1/4" (32mm) width x 3/8" (9mm) depth in a single application.

2. Two-part polyurethane sealant joint size criteria:
   a. Minimum size of joint shall be four times the anticipated movement.
   b. Sealant depth shall not exceed width for joints 1/2 inch wide or less.
   c. Sealant depth shall be less than 1/2 inch for joints wider than 1/2 inch.
   d. Minimum joint size is 1/4 inch by 1/4 inch. Maximum joint size is 2 inches wide by 5/8 inch deep in a single application.

E. Equipment:
   1. Apply sealant under pressure with power actuated hand gun or manually operated hand gun, or by other appropriate means.
   2. Use guns with a nozzle of proper size, and providing sufficient pressure to completely fill the joints as designed.
   3. If multi-component sealants are used, a two blade mixing paddle is required in the mixing process.

F. Thoroughly and completely mask joints where the appearance of primer or sealant on adjacent surfaces would be objectionable.

G. Temperature: Install all work of this section when substrate surface temperature is above 40°F and below 140°F unless the applicator obtains prior approval from the sealant manufacturer to install material outside of this temperature range.

H. Moisture: Do not apply work of this section on surfaces which are wet, damp, or have frost.

I. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets, and to ensure contact and adhesion of sealant with sides of joint.
   1. Remove excess sealant from surfaces adjacent to joints.
   2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
   3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
   4. Provide flush joint configuration where indicated per Figure 5B in ASTM C 1193.
   5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 5C in ASTM C 1193.
   6. Use masking tape to protect surfaces adjacent to recessed tooled joints.
J. Cleaning up:
1. Remove masking tape immediately after joints have been tooled.
2. Keep clean adjacent surfaces free from excess sealant as the installation progresses, using solvent or cleaning agent recommended by the sealant manufacturer.
3. Upon completion of the work of this section, promptly remove from the job site all debris, empty containers, and surplus material derived from this portion of the work.

3.06 CAULKING / GLAZING / SEALANT REPAIRS AND APPLICATION

A. Metal to Masonry Joint:
1. Cleaning and preparation:
   a. Remove all existing deteriorated caulking and sealant from joint by scraping and other mechanical means as necessary to render a clean substrate suitable for re-application of waterproofing sealant.
   b. Wipe all non-porous areas with cleaning solvent and allow to dry.
2. Apply a thin coating of specified urethane metal primer to the metal surface and allow to dry tack free.
3. Mask areas as necessary to prevent unsightly appearance of application.
4. Install a gun bead of muti-component Nonsag urethane sealant to the joint and tool to neat finish.

B. Masonry to Masonry Joint Repairs:
1. Clean out all masonry to masonry joints with hand or power tools, wipe the surface clean and install backer rod under minimum 35% compression, and tool to proper depth.
2. Prime both sides of the interior masonry joint with urethane masonry primer.
3. Install muti-component nonsag urethane sealant.
4. Tool to a neat and watertight joint.

3.07 ADJUSTING AND CLEANING

A. Repair of deficiencies:
1. Installations of details noted as deficient during final inspection must be repaired and corrected by applicator, and made ready for reinspection, within five (5) working days.

B. Clean-up:
1. Immediately upon job completion, roof membrane, flashing surfaces, ground and surrounding areas shall be cleaned of debris.

END OF SECTION