



INVITATION TO BID

#21370

For

Benjamin Franklin Elementary Parapet Rebuild and Renovations
Re-Bid

FOR THE CLEVELAND MUNICIPAL SCHOOL DISTRICT
DBA: CLEVELAND METROPOLITAN SCHOOL DISTRICT
BOARD OF EDUCATION, 1111 SUPERIOR AVENUE E, SUITE 1800
CLEVELAND, OHIO 44114

UNDER THE DIRECTION OF THE TRADES DEPARTMENT OF THE BOARD OF EDUCATION OF THE CLEVELAND
METROPOLITAN SCHOOL DISTRICT CUYAHOGA COUNTY, OHIO

Table of Contents

| | |
|--|----|
| Part I: ITB Submission & Process Requirements | 3 |
| Section A: Bid Submission & Format Requirements | 3 |
| Section B: Bid Constraints | 4 |
| Section C: Evaluation Process | 6 |
| Section D: All District Related Forms | 6 |
| Section E: Award of Contract | 6 |
| Part II: Overview, Background, Specifications and Drawings | 7 |
| Section A: Overview | 7 |
| Section B: Background | 7 |
| Section C: Specifications | 7 |
| Additional General Requirements | 7 |
| Clean Up | 11 |
| Cutting & Patching | 12 |
| Unit Masonry | 13 |
| Joint Sealants | 28 |
| Unit Prices | 35 |
| Close Out Documents | 37 |
| Portable Storage Containers | 37 |
| Part III: Bid Cost Form | 41 |
| Appendix A: District Related Forms | 44 |
| Addendum Acknowledgement Form for ITB #21370 | 44 |
| Certificate of Debarment | 45 |
| Certificate of Debarment Pg. 2 | 46 |
| Conflict of Interest Form | 47 |
| Bidder Qualifications Form | 49 |
| Non-Collusion Affidavit | 53 |
| Diversity Business Enterprise Forms | 54 |
| EOA Contractual Declaration Forms | 63 |
| References | 66 |
| Appendix B: Service Provider Checklist | 68 |

Part I: ITB Submission & Process Requirements

Part I of the ITB provides a detailed set of directions which the service provider will use to prepare their bid.

Schedule for posting and service provider selection for the **ITB #21370 – Benjamin Franklin Elementary Parapet Rebuild and Renovations – Re-Bid:**

| Step | Date* |
|--|-------------------------------------|
| ITB Posted | December 8, 2022 |
| Pre-Bid Meeting | Wednesday, December 14, 2022 |
| All final questions from service providers to the District | Tuesday, December 20, 2022 |
| Answers to service providers from the District and all addenda issued (if necessary) | Thursday, January 5, 2023 |
| ITB Responses Due | January 17, 2023 |
| Bid Opening | January 17, 2023 |
| Bid Award | February, 2023 |
| Contract Negotiation | February, 2023 |
| Contract Start | April, 2023 |

*Dates listed are subject to change at discretion of the District. Service Providers will be notified of changes to the schedule, as appropriate.

Section A: Bid Submission & Format Requirements

Bid Submission Requirements

- In order for the District to evaluate bids fairly and completely, service providers should follow the format set forth herein and provide all of the information requested. The District discourages costly bids.
- All bids shall include all bid format requirements found below. All information requested in the district related forms must be filled in legibly and completely with blue ink signatures, or the bid may be considered non-responsive. **ITB Name: Benjamin Franklin Elementary Parapet Rebuild and Renovations – Re-Bid and #21370** must be on the outside of the envelope of submittals including shipping labels.
- Sealed Responses are due at the Cashier's Office of the Cleveland Metropolitan School District, 1111 Superior Ave E. Cleveland, Ohio 44114 on or before 1:00 PM current local time on **January 17, 2023**. Mailing of Bids are encouraged. However, hand deliveries will be accepted from 12:00 PM to 1:00 PM on **January 17, 2023**. The bids will be opened following the bid cut off time at 1111 Superior Ave. E., Cleveland, Ohio 44114.
- All submissions must include one(1) original with blue signatures, one (1) copy, and one (1) electronic bid on a USB Flash Drive. Original Copy should be easily identifiable. Electronic bid should include all documents. Service Providers not complying with this requirement shall be notified that they have twenty-four (24) hours in which to comply with this requirement or their bid may be disqualified. This applies to copies only. All materials are submitted as is.
- There will be a Pre-Bid Meeting at **10:00 AM on December 14 , 2022**. The meeting will be held at Benjamin Franklin Elementary School located at 1905 Spring Road, Cleveland, Ohio 44109. Attendance at the pre-bid is encouraged but not mandatory. Suppliers are encouraged to submit questions prior to the Pre-Bid Meeting so they may be addressed. All written questions

shall be directed to the Purchasing Division via email to:

seletha.thompson@clevelandmetroschools.org. Written questions will be accepted via email until 12:00 pm on **December 20, 2022**. Under no circumstances should any firm interested in providing the services identified in the ITB, their designees, or anyone affiliated with their firm, contact any other District employee or official during the ITB process, in an attempt to lobby or influence the selection of a service provider pursuant to this ITB.

- f. The District reserves the right to reject any and all proposals, to waive any and all informalities or irregularities, and to disregard all non-conforming responsive conditional proposals. Each Proposer is liable for all proposal errors or omissions. A proposer shall not be permitted to alter or amend any proposal documents after the Proposal deadline time and date detailed in the ITB unless such is formally requested, in writing, by the District.

Bid Format Requirements

- a. The BID NAME specifications for **ITB #21370 – Benjamin Franklin Elementary Parapet Rebuild and Renovations – Re-Bid** is described in Part III. Service Providers are required to provide the information below as well as complete the District Related Forms in Appendix A.
- b. Bid Responses are to include the documents as follows:
 - i. **Transmittal Cover Letter:** Prepare a letter transmitting the bid on business letterhead. The letter should identify the business name, phone number, and business web address along with the name, phone number, and email address of the key contact person. The letter must have the signature of a person with authority to obligate the business. The transmittal cover letter shall also contain a statement that the bid is a firm offer for a ninety (90) day period.
 - ii. **Bid Cost Form**, including evidence of State certification to perform the work required.
 - iii. **Completed District Related Forms** set forth in Appendix A of this ITB.
 - iv. **Bid Guaranty:** A Certified Check for 10% of the total amount of the bid payable to the Treasurer of the Cleveland Metropolitan School District, or satisfactory bid bond executed by the bidder or a Surety company on a form supplied by the bondsman.

Section B: Bid Constraints

- i. The service provider must comply with all laws, rules and regulations dictated by the Board of Education of the Cleveland Metropolitan School District, City of Cleveland, the State of Ohio and the United States Federal Government.
- ii. Purchases funded by federal grant funds must adhere to regulations found in Uniform Guidance “Super Circular”, 2 CFR 200 (UGG), as a condition of receiving funds and to meet annual audit compliance. In an effort to keep policy for all grants consistent, the District implemented the new federal guidelines regarding procurement utilized with federal grants immediately.
- iii. The District will only accept proposals that cover all of the major components requested in the ITB.
- iv. Service provider shall not include Ohio Sales Tax in the price quoted. The District will provide tax exempt certificate to the successful Proposer.
- v. Service provider’s personnel and subcontractors on the District site will be required to meet security requirements. Service provider agrees to successfully complete background checks on all of its employees, agents and subcontracts, if necessary, who provide services on site under this scope of work. Each person on site must wear an identification badge that clearly identifies and makes visible the person’s name and company.
- vi. No response may be withdrawn for at least ninety (90) days after receipt of bids.
- vii. Bidder understands and agrees that subsequent to submission of the bid, any District resolution authorizing the award of a contract or agreement does not vest any contractual rights to the bidder.
- viii. Bidder understands and agrees that such District resolution operates only to encumber funds necessary for the project and does not create a binding contract.

- ix. Bidder further acknowledges and agrees that any such District resolution may be revoked, at any time prior to execution of a formal, written contract.
- x. Bidder acknowledges and agrees that it has no vested contractual right until such time as a purchase order or contract have been issued.
- xi. Bidder further acknowledges and agrees that execution of a contract and issuance of a purchase order is not a ministerial function but is a formal requirement for acceptance of a bid.
- xii. Bidder must present evidence to the District, upon request, that they are fully competent and have the necessary facilities, equipment and financial resources to perform the work required in the specifications within the time frame required.
- xiii. The District reserves the right to award the bid in whole or in parts, by item, by group of items, to a single service provider or to multiple service providers, where such action serves the best interests of the District.
- xiv. The successful Service provider and their subcontractor(s), including organizations having personnel, equipment and vehicles on District property, shall provide evidence of insurance as follows:
 - a. Commercial General Liability Including limited contractual liability
\$2,000,000.00 Limit of Liability
(Per occurrence)
 - b. Automobile Liability Including non-owned and hired
\$2,000,000.00 Limit of Liability
(Per occurrence)
 - c. Worker's Compensation Worker's compensation and employer's
insurance to full extent required by applicable
law
- xv. This requirement must be fulfilled by the successful service provider providing the District with a current Certificate of Insurance (standard ACORD form), showing the Board of Education of the Cleveland Municipal School District as an additional insured (Certificate Holder does not constitute being an additional insured), within five (5) days of Notice of Intent to Award Agreement. The certificates of insurance shall contain a provision that the policy or policies shall not be cancelled without thirty (30) days' prior written notice to the District.
- xvi. The required insurance must be provided by a company licensed by the State of Ohio, which company must be financially acceptable to the Administration of the Cleveland Municipal School District.
- xvii. The District is not liable for vandalism which results in damage(s) to the property or vehicles of the Vendor. The school District will not reimburse for private insurance deductibles for such vandalism.
 - a. Vandalism damage is defined as damage resulting from criminal conduct for which an individual may (but not necessarily be processed under the Ohio Revised Code.
- xviii. In submitting a bid, service providers agree, unless specifically authorized in writing by an authorized representative of the District on a case-by-case basis, that it shall have no right to use, and shall not use, the name of Cleveland Metropolitan School District, its officials or employees, in any advertising, publicity, promotion, nor to express or imply any endorsement of service provider's services.
- xix. The Diversity Business and Service Provider Contract Compliance Programs shall make every good faith effort to ensure that certified diversity business enterprises in the District's relevant geographic market area shall be afforded the maximum opportunity to compete for contracts, services, and purchases. The general goals for diversity business participation are: 15% for services, 20% for goods and supplies, and 30% for maintenance, construction, and repair. Non-diversity vendors will have their diversity business participation counted toward their goal attainment only with minority vendors who are certified and demonstrate previous experience in the respective business classification of the prime contractor. Only direct participation in the subcontract will be counted toward diversity business enterprise goal attainment. Service Providers shall refer to <https://bit.ly/3wvVApK> for further information and requirements on the District's diversity goals.

Section C: Evaluation Process

- i. **Responsiveness:** Bids will be evaluated, first, as responsive or non-responsive to the Bid specifications. A preliminary review will be conducted of all bids submitted on time to ensure the bid adheres to the material submission requirements specified in the Bid. Bids that do not meet the material submission requirements may be deemed non-responsive and rejected. In the event that all bidders do not meet one or more of the material submission requirements, the District reserves the right to continue the qualitative evaluation of the bids and select the bid(s) which most closely meets the specifications in the ITB. Bids must include, or meet, the following submission requirements:
 - a. Timely Submission
 - b. Transmittal Cover Letter
 - c. Bid Cost Form
 - d. District Related Forms
 - e. Bid Guaranty
- ii. **Qualitative Evaluation** – The Bids will be evaluated to determine the lowest responsive and responsible bidder.

Section D: All District Related Forms

There are a number of REQUIRED forms in Appendix A of the ITB that must be completed and submitted with the bid response. These forms include

- a. Addendum Acknowledgement
- b. Certificate of Debarment
- c. Conflict of Interest
- d. Proposer Qualification Form
- e. Non-Collusion Affidavit
- f. DBE Forms – A, B, C, D, E, F, G, & H
- g. EOA Contractual Declaration Forms
- h. References

Section E: Award of Contract

- i. The terms of this agreement will begin immediately upon selection, approval, and contract execution through completion of the lowest responsive and responsible service provider.
- ii. The contract documents consist of the following:
 - a. District Contract
 - b. Certified Purchase Order or Supplier Contract
 - c. ITB Submission Requirements
 - d. Bid Cost Form
 - e. Bid Guaranty
 - f. All Required District Related Forms
 - g. All applicable addenda
- iii. The awarded bidder shall perform all work described in the contract documents, including without limitation, all terms and conditions of the specifications contained herein or otherwise stated in the bid documents and reasonably inferable therefrom by the bidder as necessary to produce the results intended thereby for specifications requested herein by the District.
- iv. CMSD reserves the right to reject all bids and deviate from this purchasing process to utilize other purchasing mechanisms available to the district under Ohio Law. Scope review and follow-up discussions with the apparent low bidder may be requested. CMSD reserves the right to interview or to seek additional information related to criteria already specified in the Invitation to Bid after opening the bids prior to issuance a certified Purchase Order or Supplier Contract.

Part II: Overview, Background, Specifications and Drawings

Section A: Overview

The Cleveland Metropolitan School District (hereafter the “District”) under ITB #21370 is seeking service providers to provide services to rebuild and renovate the parapet wall, and removal of windows and infill window wells at Benjamin Franklin Elementary School located at 1905 Spring Road, Cleveland, Ohio 44109.

To facilitate submission and evaluation of bids, the following provides relevant background information, specifications, and instructions for service providers to submit their bid responses to this ITB. Service providers may submit a bid in response to the specifications below.

Section B: Background

The District is a large urban school system with over 100 instructional non-instructional sites, approximately 6,000 teachers and administrative staff, 36,000 District students, and 3,500 classrooms.

BACKGROUND INFORMATION ABOUT WHY THE PROJECT IS HAPPENING

Section C: Specifications

PROJECT SPECIFICATIONS

The Cleveland Metropolitan School District is proposing to rebuild and renovate the parapet wall including installation of stainless steel clips into the top of the water table stone units, repointing masonry joints, masonry crack repair, and sealant installation at skyward joints; and infilling windows on the East elevation and infilling area way with geofoam and a new slab at the Ben Franklin Elementary School. The Cleveland Metropolitan School District is also proposing to remove windows in the window well on East side of building and infill the window well to grade. Ben Franklin Elementary School is located at 1905 Spring Road, Cleveland, Ohio 44109.

Additional General Requirements

1.01 General Requirements

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other division 1 specifications sections, apply to this section.

1.02 Meetings

- A. Pre-construction meeting
 - Within 10 days after notice to proceed, and before any work is started, contractor to meet with owner's representative for a pre-construction meeting to review the scope of work, staging and other agenda as noted below.
 - 1. Establish construction start date
 - 2. Construction schedule
 - 3. Use of approaches, corridors, stairways, elevators, and other public areas.
 - 4. Entry into occupied area for inspection and repairs; required notices and scheduling

5. Staging, material, and equipment storage areas.
6. Submittal review
7. Not Used
8. Not Used
9. Temporary utilities; water, power, parking, etc.
10. Safety and health

B. Progress meetings

Bi-weekly progress meetings are not required. If job progress schedule is not being adhered to, Owners Representative will schedule job meeting as required.

1.03 Drawings and Specifications

- A. General Contractor to furnish all required Architectural drawing and future revised issues. General Contractor is responsible for additional prints, if required for work.
- B. Should errors be found in drawings or specifications, immediately notify General Contractor and Owner's Representative in writing and do not proceed with work in question until error is resolved with owner's representative.
- C. Changes to drawings will be shown by notes in margins including new issues, number, and date. Contractor shall mark void all previous issues.
- D. Have available at project site one complete set of drawings, specifications and all addenda issued. Keep such materials in good order and available to owner's representative at all times.

1.04 Changes in the Work / Change Orders

- A. In the event changes are required in the work, the applicable unit pricing for the work shall be used in adjusting the contract price. It is agreed that this schedule be used only for the purpose of establishing change order prices and that all other provisions of the contract governing shall remain in force.
- B. Changes in the work shall be authorized by the owner or his representative. Authorization shall be secured by the contractor prior to commencement of the work, by submitting to the owner's representative a properly executed and signed change order (AIA DOCUMENT G701 OR CMSD CHANGE ORDER DOCUMENT).
- C. Value of change shall be governed by unit pricing. Changes of work which cannot be valued by unit / alternate pricing shall be valued in accordance with AIA A201 (CURRENT EDITION).

1.05 As Built Drawings

- A. Required.

1.06 Advertising, References and Pictures

- A. No references to the project are to be made or photographs of the work in any advertisement without written permission of the owner. These limitations also apply to subcontractors and vendors.

1.07 Relocation of Materials, Equipment, and Facilities

- A. Owner's representative will make all reasonable effort to provide suitable and undisturbed space to the contractor; however, if it becomes necessary at any time during progress of work to move temporary storage facilities, field offices, equipment or materials, the contractor, when instructed by the owner's representative, shall move such components without additional cost to the owner

1.08 Labor and Material

- A. By executing the contract and or purchase order, contractor warrants to owner that all materials and equipment furnished under the contract will be new unless otherwise specified, and that all materials, equipment, and labor will be of good quality, free of defects and in accordance with the contract documents.

All work not conforming to these requirements will be considered defective and shall be replaced without additional cost to the owner. If required by owner's representative, furnish evidence as to the kind and quality of materials and equipment furnished by contractor.

1.09 Supervision

- A. Assign to the work a competent resident superintendent and necessary assistants, all satisfactory to the owner's representative. Superintendent shall represent contractor and all instructions given to him shall be as binding as if given to contractor. Contractor's superintendent is not to be replaced during progress of work without consent of owner's representative.
- B. Superintendent and at least two assistants must have attended and passed the primary materials manufacturer's installation course. Evidence of completion of manufacturer's training must be presented prior to project start.

1.10 Removal of Workmen

- A. Contractor shall be responsible for all personnel employed in work and shall have power to employ and discharge such personnel, or remove from project site, personnel employed in the work, who in the judgment of owner's representative, are detrimental to the best interest of owner and the project.

1.11 Inspection and Tests

- A. Parts of the specification state that the owner's representative or a testing laboratory retained by the owner will perform certain tests, contractor to cooperate with the owner's representative and assist the laboratory technician at the site in the performance of tests by furnishing labor, equipment, and small tools (i.e. wheel barrow, shovel, etc.).
- B. Notify the owner's representative in advance of test and inspections the contractor is to perform at the site. The owner may witness same at his option. It is the contractor's responsibility to notify the proper building department authorities, insurance carriers, etc. of scheduled test and inspections and perform those functions to their satisfaction.
- C. Notify the owner's representative of any scheduled test dates that are away from the job site, with at least one weeks advance notice. All factory tests shall be witnessed by the owner's representative, unless otherwise directed. Release of materials and / or equipment or waiver of inspection shall not relieve the supplier or contractor from responsibility nor invalidate any claim which the owner may make because of unsatisfactory material and/ or construction.
- D. See to it that the owner's representative has access during working hours to all parts of the factory or fabricator's shop where materials and / or equipment is being fabricated or manufactured for this project and is provided with all reasonable inspection facilities.

1.12 Field Measurements

- A. Obtain or verify all dimensions for the accommodation of equipment and / or materials furnished by the owner and / or the contractor and installed by the contractor. Dimension on the drawings indicate nominal sizes under ideal conditions and shall not under any circumstances be so construed as to relieve the contractor of the responsibility of taking measurements in the field and furnishing material of the correct dimensions.

1.13 Lines and Grades

- A. The owner's representative will designate control lines for the contractor's use, if necessary.

1.14 Interference

- A. Coordinate work in order to eliminate interference. Examine in advance the location of mechanical and electrical systems and equipment to be installed and properly coordinate the installation of resolved by the contractor, bring the situation to the attention of the owner's representative before proceeding any further with the work.

1.15 Access Roads

- A. All contractors' employees and trucking for construction purposes shall have access to the site as directed by the owner's representative.
- B. The contractor shall be liable for any damages caused to existing roadways, sidewalks, and fire protection system components as a result of the contractor's operation or that of his personnel. All such damage shall be repaired as soon as possible at the contractor's expense.
- C. All delivery of material and equipment shall be directly to the contractor at the construction area. Material deliveries shall be arranged so as not to interfere with owner's employees entering and leaving the site.

1.16 Plant Interferences

- A. Contractor shall see to it that his personnel work in complete harmony with the owner's employees.
- B. No interruption of owner's operations will be permitted and contractor shall schedule and perform his work accordingly.

1.17 Plant Rules

- A. Not Used
- B. Contractor employees shall be instructed to refrain from fraternization with the building occupants.
- C. The contractor shall furnish owner's representative on the job with a list of personnel to be working at the project.
- D. The owner's security service shall retain the right to inspect all packages, material, equipment, and property of any nature, entering and/ or leaving the plant, as circumstances warrant. The guard shall hold any material, which he deems irregular or about which he has any doubt until it is inspected and passed by the owner's representative.
- E. Motor vehicles will be permitted at the designated dock, to load or unload materials, equipment, tools, trash, etc. All motor vehicles while on owner's property shall be driven slowly with extreme caution, obeying all posted traffic signs.
- F. Contractor has the responsibility to protect all of his personal property, materials, equipment, etc, from theft. All material, equipment tools, etc. must be stored in a locked temporary storage unit, due to the high theft rate in the area.
- G. Contractor shall not leave materials, tools, etc., lying in an unsafe manner while working on the owner's property. Do not store tools or materials, which block an exit or path to an exit.
- H. Provide barricades and warning signs at all operation of the work which are deemed hazardous by the owner's representative to the movement of both contractor's and owner's personnel.
- I. Maintain good housekeeping. Do not allow accumulation of rubbish or scrap materials. Remove rubbish and scrap daily.
- J. CMSD prohibits the use, possession, distribution, or sale on the project premises, facilities, or work place of any of the following: fire arms, alcoholic beverage, intoxicants, drugs, and related drug

paraphernalia, also, the sale, distribution or use on any tobacco products on the project premises is prohibited.

Employees must not report for duty or perform work while under the influence of any drug, alcoholic beverage, or intoxicant. Employees on the project premises may be subject to search as provided herein. Applicants and employees will be required to consent to drug/alcohol testing as provided here in.

- K. Contact owner's representative on job prior to placing or using any rigging, hoists cranes, temporary stairs, towers, etc.
- L. Provide the owner's representative with sufficient advance noticed, when planning to work outside normal hours so that his manpower, security forces and other interested parties may be advised.
- M. Left Blank
- N. Provide barricades and warning signs at outside excavation or at holes cut through walls, floors, or roofs in building, also as required about any working area.
- O. Smoking is prohibited in school district buildings and vehicles.
- P. Use only 3-wire electrical equipment with ground fault protection. Electrical extension cords shall be kept clear of aisles.
- Q. All emergency accesses from the buildings must be kept clear at all times.
- R. All ladders are to be taken down at the end of each day.

1.18 Protection of Work and Building

- A. The contractor shall protect and maintain all building entrances to allow safe pedestrian entrance to the building.
- B. Left Blank
- C. Provide protection of equipment and personnel during operations creating dust from drilling, chipping, etc.
- D. The contractor shall be responsible for the protection of the building exterior and grounds from contractor operations. When hoisting materials and / or removing materials, cover exterior walls, including all items in the work area with tarps or other required protection.

Clean Up

1.01 General Requirements

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other division 1 specifications sections, apply to this section.

1.02 Cleaning Up

- A. Refer to respective trade section of specifications.
 - 1. Throughout the construction period, Prime and Sub Contractors shall maintain construction site in a standard of cleanliness.
 - 2. Prime and Sub Contractors shall conduct daily inspection to verify standards of cleanliness of this section are being met.
 - 3. During Construction

- A. Prime and Sub Contractors shall keep his work areas free of accumulation of waste material, rubbish, and debris. Contractors shall collect waste, rubbish and debris daily and place in areas designated, for removal from site.
 - B. Prime and Sub Contractors shall remove waste materials, rubbish, and debris from site and legally dispose of it at public or private dumping areas off the owner's site.
 - C. Prime and Sub Contractors shall handle materials in a controlled manner with as few handling as possible.
4. Final Cleaning:
- A. *Final "site" (contractor's area of work) cleaning shall be done, where possible, just before final acceptance of the work (or at such time as directed by the owner's representative.*
 - B. Unless otherwise specified or shown to the contrary, all portions of the premises or site, which were disturbed, by the contractors or his employees during the progress of the work, shall be left restored to acceptable condition.
 - C. No burning of rubbish / debris will be permitted on the owner property.

Cutting & Patching

1.01 General Requirements

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other division 1 specifications sections, apply to this section.

1.02 Definition

- A. Cutting: Removal of existing 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.

1.03 Submittals

- A. Submit letter describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 1. Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 2. Describe the changes to the existing structure and the anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 3. List products to be used and firms or entities that will perform the work.
 4. Indicate when cutting and patching will be performed.
 5. List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 6. Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculation showing integration of reinforcement with original structure.
 7. Obtain approval of cutting and patching work by CMSD'S Structural Engineer or Architect.

1.04 Quality Assurance

- A. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load —deflection ratio.
- B. Do not cut and patch the following operating elements and related components in a manner that results in reducing their capacity to perform as intended or those results in increased maintenance or decreased operation life or safety.
 - 1. Primary operation systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-protection systems.
 - 4. Control systems.
 - 5. Communication systems.
 - 6. Conveying systems
 - 7. Electrical systems.
- C. Do not cut and patch the following 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 those results in increased maintenance or decrease operation life or safety.
 - 1. Water, moisture, or vapor barriers.
 - 2. Membranes and flashings.
 - 3. Exterior curtain-wall construction
 - 4. Equipment supports.
 - 5. Piping, ductwork, vessels, and equipment.
 - 6. Noise and vibration control elements and systems.
- D. 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 reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
 - 1. If possible, retain original Installer or fabricator to cut and patch exposed work. If it is impossible to engage original Installer or fabricator, engage another recognized, experienced, and specialized firm.

Unit Masonry

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and supplementary conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Concrete masonry units.
 - 2. Building (common) brick.
 - 3. Hollow brick.
 - 4. Stone trim units.
 - 5. Mortar and grout.
 - 6. Steel reinforcing bars.
 - 7. Masonry-joint reinforcement.

8. Ties and anchors.
9. Embedded flashing.
10. Miscellaneous masonry accessories.
11. Masonry-cell fill.

1.3 ALLOWANCES

- A. Face brick is part of the Face Brick Allowance.

1.4 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection:
 1. Clay face Hollow brick, in the form of straps of five or more bricks.
 2. Stone trim.
 3. Colored mortar.
 4. Weep holes/cavity vents.
- C. Samples for Verification: For each type and color of the following:
 1. Clay face Hollow brick, in the form of straps of five or more bricks.
 2. Special brick shapes.
 3. Weep holes and cavity vents.
 4. Accessories embedded in masonry.

1.6 INFORMATIONAL SUBMITTALS

- A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
 1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.
- B. Qualification Data: For testing agency.
- C. Material Certificates: For each type and size of the following:
 1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C 67.

- d. For surface-coated brick, include test report for durability of surface appearance after 50 cycles of freezing and thawing according to ASTM C 67.
 2. Mortar admixtures.
 3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
 4. Grout mixes. Include description of type and proportions of ingredients.
 5. Reinforcing bars.
 6. Joint reinforcement.
 7. Anchors, ties, and metal accessories.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.
 2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.
- E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.
- F. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for testing indicated.
- B. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects.
1. Build sample panels for typical exterior wall in sizes approximately **36 inches (1200 mm)** long by **36 inches (1200 mm)** high by one wythe thick.
 2. Build sample panels facing south.
 3. Where masonry is to match existing, build panels adjacent and parallel to existing surface.
 4. Clean one-half of exposed faces of panels with masonry cleaner indicated.
 5. Protect approved sample panels from the elements with weather-resistant membrane.
 6. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
 - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless Architect specifically approves such deviations in writing.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
1. Build mockups for typical exterior wall in sizes approximately **36 inches (1200 mm)** long by **36 inches (900 mm)** high by full thickness, including face and backup wythes and accessories.
 - a. Include a sealant-filled joint at least **16 inches (400 mm)** long in exterior wall mockup.

- b. Include through-wall flashing installed for a **24-inch (600-mm)** length in corner of exterior wall mockup approximately **16 inches (400 mm)** down from top of mockup, with a **12-inch (300-mm)** length of flashing left exposed to view (omit masonry above half of flashing).
2. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.
3. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
4. Protect accepted mockups from the elements with weather-resistant membrane.
5. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups is also for other material and construction qualities specifically approved by Engineer in writing.
 - b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Engineer specifically approves such deviations in writing.
6. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.9 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of **24 inches (600 mm)** down both sides of walls, and hold cover securely in place.
 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of **24 inches (600 mm)** down face next to unconstructed wythe, and hold cover in place.

- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is **40 deg F (4 deg C)** and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.
- C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.3 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 1. Provide special shapes for corners, movement joints, headers, bonding, and other special conditions.
 2. Provide square-edged units for outside corners unless otherwise indicated.
- B. CMUs: ASTM C 90.
 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of **2150 psi (14.8 MPa)**.
 2. Density Classification: Normal weight.
 3. Size (Width): Manufactured to dimensions **3/8 inch (10 mm)** less than nominal dimensions.

2.4 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
 3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
 4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Building (Common) Brick: ASTM C 62, Grade SW.
 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of **2100 psi (14.48 MPa)**.
 2. Size: Match size of face brick.
 3. Application: Use where brick is indicated for concealed locations. Face brick complying with requirements for grade, compressive strength, and size indicated for building brick may be substituted for building brick.

2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold- weather construction. Provide natural color or white cement as required to produce mortar color indicated.
 1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no

other ingredients.

- D. Masonry Cement: ASTM C 91/C 91M.
- E. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979/C 979M. Use only pigments with a record of satisfactory performance in masonry mortar.
- F. Aggregate for Mortar: ASTM C 144.
 - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
 - 2. For joints less than **1/4 inch (6 mm)** thick, use aggregate graded with 100 percent passing the **No. 16 (1.18-mm)** sieve.
 - 3. White-Mortar Aggregates: Natural white sand or crushed white stone.
 - 4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
- G. Aggregate for Grout: ASTM C 404.
- H. Epoxy Pointing Mortar: ASTM C 395, epoxy-resin-based material formulated for use as pointing mortar for glazed or pre-faced masonry units (and approved for such use by manufacturer of units); in color indicated or, if not otherwise indicated, as selected by Architect from manufacturer's colors.
- I. Refractory Mortar Mix: Ground fireclay or nonwater-soluble, calcium aluminate, medium-duty refractory mortar that passes ASTM C 199 test; or an equivalent product acceptable to authorities having jurisdiction.
- J. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
- K. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer.
- L. Water: Potable.

2.6 REINFORCEMENT

- A. Masonry-Joint Reinforcement, General: ASTM A 951/A 951M.
 - 1. Exterior Walls: Hot-dip galvanized carbon steel.
 - 2. Wire Size for Side Rods: **0.187-inch (4.76-mm)** diameter.
 - 3. Wire Size for Cross Rods: **0.187-inch (4.76-mm)** diameter.
 - 4. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than **16 inches (407 mm)** o.c.
 - 5. Provide in lengths of not less than **10 feet (3 m)**, with prefabricated corner and tee units.
- B. Masonry-Joint Reinforcement for Multiwythe Masonry:
 - 1. Ladder type with one side rod at each face shell of hollow masonry units more than **4 inches (100 mm)** wide, plus two side rods at each wythe of masonry **4 inches (100 mm)** wide or less.
 - 2. Tab type, either ladder or truss design, with one side rod at each face shell of backing wythe and with rectangular tabs sized to extend at least halfway through facing wythe, but with

at least **5/8-inch (16-mm)** cover on outside face.

3. Adjustable (two-piece) type, either ladder or truss design, with one side rod at each face shell of backing wythe and with separate adjustable ties with pintle-and-eye connections having a maximum horizontal play of **1/16 inch (1.5 mm)** and maximum vertical adjustment of **1-1/4 inches (32 mm)**. Size ties to extend at least halfway through facing wythe but with at least **5/8-inch (16-mm)** cover on outside face. Ties have hooks or clips to engage a continuous horizontal wire in the facing wythe.

2.7 TIES AND ANCHORS

- A. General: Ties and anchors shall extend at least **1-1/2 inches (38 mm)** into veneer but with at least a **5/8-inch (16-mm)** cover on outside face.
- B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
 1. Mill-Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M, with ASTM A 641/A 641M, Class 1 coating.
 2. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M, with ASTM A 153/A 153M, Class B-2 coating.
 3. Galvanized-Steel Sheet: ASTM A 653/A 653M, Commercial Steel, **G60 (Z180)** zinc coating.
 4. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
- C. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
 1. Tie Section: Triangular-shaped wire tie made from **0.187-inch- (4.76-mm-)** diameter, hot-dip galvanized steel wire.
- D. Rigid Anchors: Fabricate from steel bars **1-1/2 inches (38 mm)** wide by **1/4 inch (6.35 mm)** thick by **24 inches (610 mm)** long, with ends turned up **2 inches (51 mm)** or with cross pins unless otherwise indicated.
 1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

2.8 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:
 1. Stainless Steel: ASTM A 240/A 240M or ASTM A 666, Type 304, **0.016 inch (0.40 mm)** thick.
 2. Copper: ASTM B 370, Temper H00, cold-rolled copper sheet, **16-oz./sq. ft. (4.9-kg/sq. m)** weight or **0.0216 inch (0.55 mm)** thick or ASTM B 370, Temper H01, high-yield copper sheet, **12-oz./sq. ft. (3.7-kg/sq. m)** weight or **0.0162 inch (0.41 mm)** thick.
 3. Fabricate continuous flashings in sections **96 inches (2400 mm)** long minimum, but not exceeding **12 feet (3.7 m)**. Provide splice plates at joints of formed, smooth metal flashing.
 4. Fabricate through-wall metal flashing embedded in masonry from stainless steel, with ribs at **3-inch (76-mm)** intervals along length of flashing to provide an integral mortar bond.
 5. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
 6. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing **1/2 inch (13 mm)** out from wall, with outer edge bent down 30

degrees and hemmed.

7. Fabricate metal drip edges from stainless steel. Extend at least **3 inches (76 mm)** into wall and **1/2 inch (13 mm)** out from wall, with outer edge bent down 30 degrees and hemmed.
8. Fabricate metal sealant stops from stainless steel. Extend at least **3 inches (76 mm)** into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for **3/4 inch (19 mm)** and down into joint **1/4 inch (6 mm)** to form a stop for retaining sealant backer rod.
9. Fabricate metal expansion-joint strips from stainless steel to shapes indicated.
10. Solder metal items at corners.

B. Flexible Flashing: Use the following unless otherwise indicated:

1. Copper-Laminated Flashing: **5-oz./sq. ft. (1.5-kg/sq. m)** copper sheet bonded between two layers of glass-fiber cloth. Use only where flashing is fully concealed in masonry.

C. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge.
4. Where flashing is fully concealed, use flexible flashing.

D. Solder and Sealants for Sheet Metal Flashings:

1. Solder for Stainless Steel: ASTM B 32, Grade Sn96, with acid flux of type recommended by stainless-steel sheet manufacturer.
2. Solder for Copper: ASTM B 32, Grade Sn50 with maximum lead content of 0.2 percent.
3. Elastomeric Sealant: ASTM C 920, chemically curing urethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and remain watertight.

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

F. Termination Bars for Flexible Flashing: Stainless steel bars **1/8 inch by 1 inch (3 mm by 25 mm)**.

G. Termination Bars for Flexible Flashing: Stainless-steel sheet **0.019 inch by 1-1/2 inches (0.48 mm by 38 mm)** with a **3/8 inch (10-mm)** sealant flange at top.

H. Termination Bars for Flexible Flashing: Aluminum sheet **0.064 inch by 1-1/2 inches (1.63 mm by 38 mm)** with a **3/8-inch (10-mm)** sealant flange at top.

2.9 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226/D 226M, Type I (No. 15 asphalt felt).
- D. Weep/Cavity Vent Products: Use one of the following unless otherwise indicated:
 - 1. Wicking Material: Absorbent rope, made from cotton, **1/4 to 3/8 inch (6 to 10 mm)** in diameter, in length required to produce **2-inch (50-mm)** exposure on exterior and **18 inches (450 mm)** in cavity. Use only for weeps.
 - 2. Round Plastic Weep/Vent Tubing: Medium-density polyethylene, **3/8-inch (9-mm)** OD by **4 inches (100 mm)** long.
 - 3. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth **1/8 inch (3 mm)** less than depth of outer wythe, in color selected from manufacturer's standard.
 - 4. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth **1/8 inch (3 mm)** less than depth of outer wythe; in color selected from manufacturer's standard.

2.10 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.11 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Use portland cement-lime mortar unless otherwise indicated.
 - 3. For exterior masonry, use portland cement-lime mortar.
 - 4. For reinforced masonry, use portland cement-lime mortar.
 - 5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.
 - 1. For masonry below grade or in contact with earth, use Type M.
 - 2. For reinforced masonry, use Type S.
 - 3. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.
- D. Pigmented Mortar: Use colored cement product or select and proportion pigments with other

ingredients to produce color required. Do not add pigments to colored cement products.

1. Pigments shall not exceed 10 percent of portland cement by weight.
2. Pigments shall not exceed 5 percent of masonry cement by weight.
3. Mix to match Architect's sample.
4. Application: Use pigmented mortar for exposed mortar joints with the following units:
 - a. Hollow brick.
 - b. Stone trim units.
 - c. Cast-stone trim units.

E. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.

1. Mix to match Architect's sample.
2. Application: Use colored-aggregate mortar for exposed mortar joints with the following units:
 - a. Clay face brick.
 - b. Hollow brick.
 - c. Stone trim units.
 - d. Cast-stone trim units. PART 3 -

EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
 2. Verify that foundations are within tolerances specified.
 3. Verify that reinforcing dowels are properly placed.
 4. Verify that substrates are free of substances that impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.
- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units

with cut surfaces and, where possible, cut edges concealed.

- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- G. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

- 1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
- 2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
- 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

- 1. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 2. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 3. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 4. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 5. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2-inch (12-mm) maximum.
- 6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm) except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

- 1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
- 2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
- 3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
- 4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm). Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch (3 mm).
- 5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by

more than 1/16 inch (1.5 mm) from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry to match existing bond pattern; do not use units with less-than-nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches (100 mm). Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

- A. Lay hollow brick as follows:
 - 1. Bed face shells in mortar and make head joints of depth equal to bed joints.
 - 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
 - 3. Bed webs in mortar in grouted masonry, including starting course on footings.
 - 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
 - 5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.
- B. Lay solid masonry units and hollow brick with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Set stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
 - 1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
 - 2. Allow cleaned surfaces to dry before setting.
 - 3. Wet joint surfaces thoroughly before applying mortar.
 - 4. Rake out mortar joints for pointing with sealant.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 COMPOSITE MASONRY

- A. Bond wythes of composite masonry together as follows:
 - 1. Header Bonding: Provide masonry unit headers extending not less than **3 inches (76 mm)** into each wythe. Space headers not more than **8 inches (203 mm)** clear horizontally and **16 inches (406 mm)** clear vertically.
- B. Corners: Provide interlocking masonry unit bond in each wythe and course at corners unless otherwise indicated.

3.7 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in- plane wall or partition movement.
- B. Form expansion joints in brick as follows:
 - 1. Build flanges of metal expansion strips into masonry. Lap each joint **4 inches (100 mm)** in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
 - 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
 - 3. Build in compressible joint fillers where indicated.
 - 4. Form open joint full depth of brick wythe and of width indicated, but not less than **3/8 inch (10 mm)** for installation of sealant and backer rod specified in Section 7 "Joint Sealants."
- C. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod **3/8 inch (10 mm)**.
 - 1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.8 FLASHING, WEEP HOLES, AND CAVITY VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
 - 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 - 2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of **4 inches (100 mm)**, and through inner wythe to within **1/2 inch (13 mm)** of the interior face of wall in exposed masonry. Where interior face of wall is to receive furring or framing, carry flashing completely through inner wythe and turn flashing up approximately **2 inches (50 mm)** on interior face.
 - 3. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of **4 inches (100 mm)**, and **1-1/2 inches (38 mm)** into the inner wythe. Form **1/4-inch (6-mm)** hook in edge of flashing embedded in inner wythe.

4. At lintels and shelf angles, extend flashing a minimum of **6 inches (150 mm)** into masonry at each end. At heads and sills, extend flashing **6 inches (150 mm)** at ends and turn up not less than **2 inches (50 mm)** to form end dams.
5. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing **1/2 inch (13 mm)** back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
6. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing **1/2 inch (13 mm)** back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.
7. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

3.9 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.
- B. Testing Frequency: One set of tests for each **5000 sq. ft. (464 sq. m)** of wall area or portion thereof.
- C. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C 67 for compressive strength.
- D. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.
- E. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for compressive strength.
- F. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.
- G. Prism Test: For each type of construction provided, according to ASTM C 1314 at 7 days and at 28 days.

3.10 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
7. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
8. Clean stone trim to comply with stone supplier's written instructions.
9. Clean limestone units to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.11 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 1. Crush masonry waste to less than 4 inches (100 mm) in each dimension.
 2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
 3. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade.
- C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.
- D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

Joint Sealants

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and supplementary conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Silicone joint sealants.
2. Nonstaining silicone joint sealants.
3. Urethane joint sealants.

B. Related Requirements:

1. Section 079100 "Preformed Joint Seals" for preformed compressible foam and precured joint seals.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in **1/2-inch- (13-mm-)** wide joints formed between two **6-inch- (150-mm-)** long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Product Test Reports: For each kind of joint sealant, for tests performed by a qualified testing agency.
- C. Field-Adhesion-Test Reports: For each sealant application tested.
- D. Sample Warranties: For special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
 1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
 1. Locate test joints where indicated on Project or, if not indicated, as directed by Engineer.

2. Conduct field tests for each kind of sealant and joint substrate.
3. Notify Engineer seven days in advance of dates and times when test joints will be erected.
4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.7 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer[**or are below 40 deg F (5 deg C)**].
 2. When joint substrates are wet.
 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.8 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 2. Disintegration of joint substrates from causes exceeding design specifications.
 3. Mechanical damage caused by individuals, tools, or other outside agents.
 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric

contaminants.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

- A. 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 joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Owner from manufacturer's full range.

2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 100/50, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
- B. Silicone, S, NS, 50, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
- C. Silicone, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- D. Silicone, S, NS, 50, T, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Uses T and NT.

2.3 NONSTAINING SILICONE JOINT SEALANTS

- A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.
- B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
- C. Silicone, Nonstaining, S, NS, 50, NT: Nonstaining, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
- D. Silicone, Nonstaining, S, NS, 100/50, T, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- E. Silicone, Nonstaining, M, NS, 50, NT: Nonstaining, multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C

920, Type M, Grade NS, Class 50, Use NT.

2.4 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- B. Urethane, M, NS, 50, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Use NT.
- C. Urethane, M, NS, 50, T, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Uses T and NT.

2.5 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type O (open-cell material), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. 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. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. 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 any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - c. Stone.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT 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 sealant backings of kind 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, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and 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.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs 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 profile per Figure 8A in ASTM C 1193 unless otherwise indicated.
 4. Provide flush joint profile at skyward joints according to Figure 8B in ASTM C 1193.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed and cured sealant joints as follows:
 - a. Perform 5 tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
 - b. Perform one test for each 1000 feet (300 m) of joint length thereafter or one test per each floor per elevation.
 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 3. Inspect tested joints and report on the following:
 - a. Whether sealants filled joint cavities and are free of voids.
 - b. Whether sealant dimensions and configurations comply with specified requirements.
 - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
 4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were

primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.

5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

- B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
 1. Joint Locations:
 - a. Construction joints in cast-in-place concrete.
 - b. Control and expansion joints in unit masonry.
 - c. Joints in dimension stone cladding.
 - d. Joints between different materials listed above.
 - e. Other joints as indicated on Drawings.
 2. Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.
 3. Joint-Sealant Color: As selected by Owner from manufacturer's full range of colors.

Unit Prices

Part 1 - General

1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and supplementary conditions and other Division 01 Specification Sections, apply to this Section.

1.2 Summary

- A. Section includes administrative and procedural requirements for unit prices.

1.3 Definitions

- A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 Procedures

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

Part 3 - Execution

3.1 Schedule of Unit Prices

A. Unit Price No. 1: Parapet Rebuild.

- 1. Description: Remove existing limestone coping stone and salvage. Demolish brick masonry parapet to roof level. Shore existing limestone water table. Install new 3-wythe brick masonry parapet and salvaged limestone coping to match existing surrounding parapet. Repair roofing and scuppers as required.
- 2. Unit of Measurement: Square Feet.

B. Unit Price No. 2: Re-Pointing of Masonry Joints.

- 1. Description: Cut out and remove existing deteriorated mortar to depths indicated on the drawings, then install new pointing mortar to match existing, building it up in three individual layers, as per the drawings and specifications. Remove loose paint if indicated
- 2. Unit of Measurement: Square Feet.

C. Unit Price No. 3: Masonry Crack Repair.

- 1. Description: Cut back and clean out existing crack for the width and depth indicated. Install sealant primer on cut surfaces of joint (per manufacturing recommendations). Color to match cleaned stone. Install closed cell backer rod and urethane sealant.
- 2. Unit of Measurement: Lineal Feet.

D. Unit Price No. 4: Sealant Installation at Skyward Joints.

- 1. Description: Cut out and remove existing deteriorated mortar joints to a depth of $\frac{3}{4}$ " and install new closed-cell foam backer rod and urethane sealant in those joints
- 2. Unit of Measurement: Lineal Feet.

Close Out Documents

1.01 General Requirements

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other division 1 specifications sections, apply to this section.

1.02 Contractor to furnish the following close out documents, in a three-ring loose leaf binder. Closeout documents must be submitted to the owner's representative prior to final payment (retainage).

- A. Manufactures warranties — Required
- B. Contractor warranty- Required
- C. Material and supplier's warranty — Required
- D. List of subcontractor, materials, and equipment suppliers with current address and phone numbers.
- E. Waiver of Lien
- F. Affidavit of Contractor
- G. Completed Punch List or Verification Letter
- H. Consent of Surety
- I. Copy of Custodial Overtime Check (where applicable)
- J. As Built Drawings — Required
- K. Photographs per Section 01322-1

Portable Storage Containers

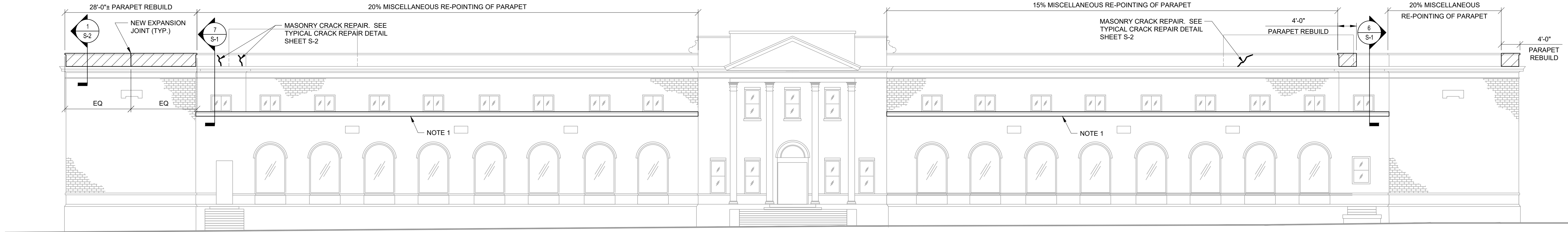
1.01 General Requirements

- A. Drawings and general provisions of the contract, including general and supplementary conditions and other division 1 specifications sections, apply to this section.

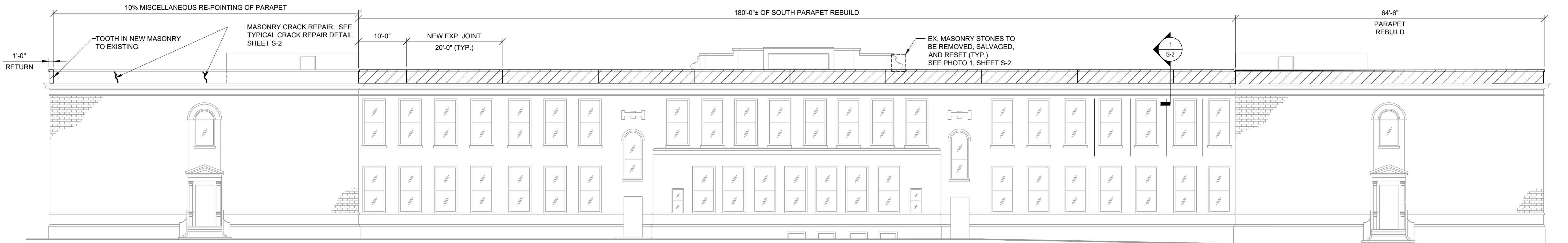
1.02 Contractor to furnish two (2) Mobile Storage Containers with double doors, size 8' x 8' x 40' long, for temporary storage of athletic equipment from the Stadium, for the duration of the Project.

- A. Rental cost to be included in the Base Bid.
- B. Rental Companies
 - 1. Sommer's Mobile Leasing, Inc.
1800 Lorain Blvd. Elyria, Ohio 44035
Ph.: 1-800-826-5654
 - 2. Other Approved Rental Companies.

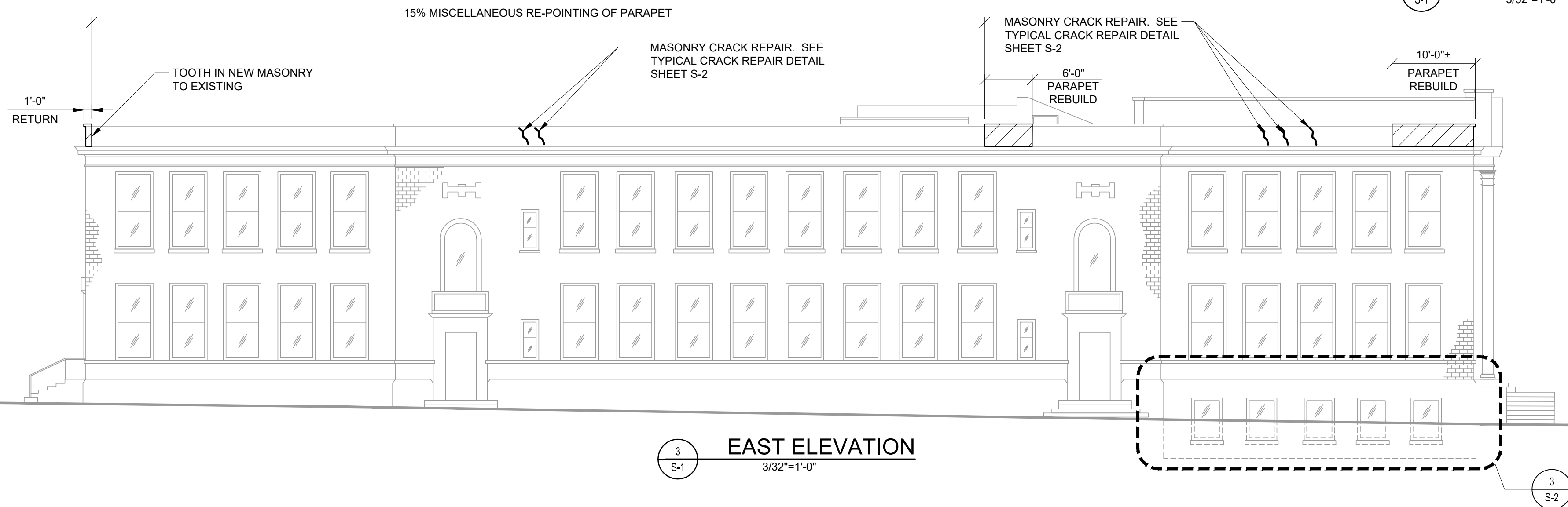
STRUCTURAL DRAWINGS



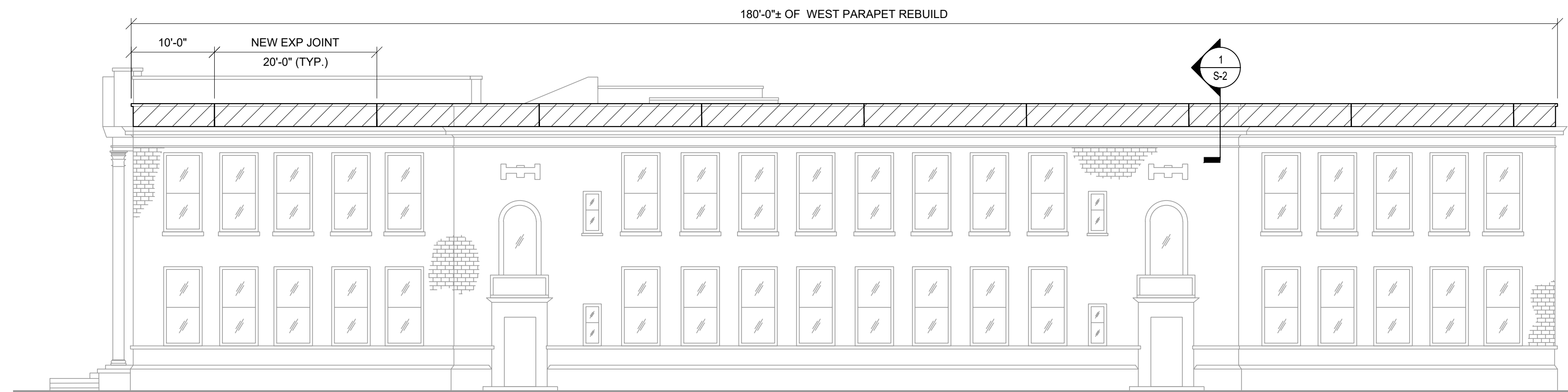
1 NORTH ELEVATION
3/32"=1'-0"



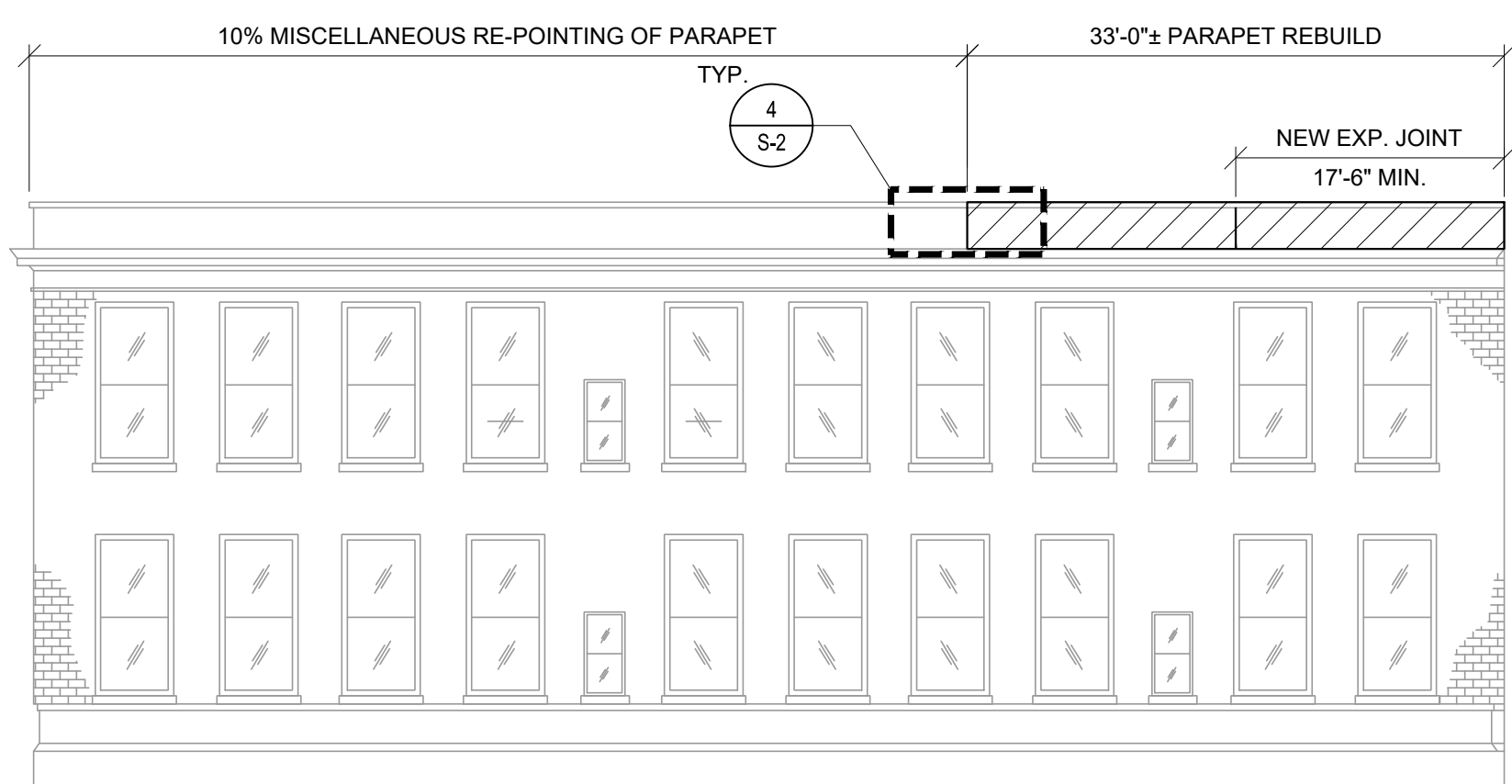
2 SOUTH ELEVATION
3/32"=1'-0"



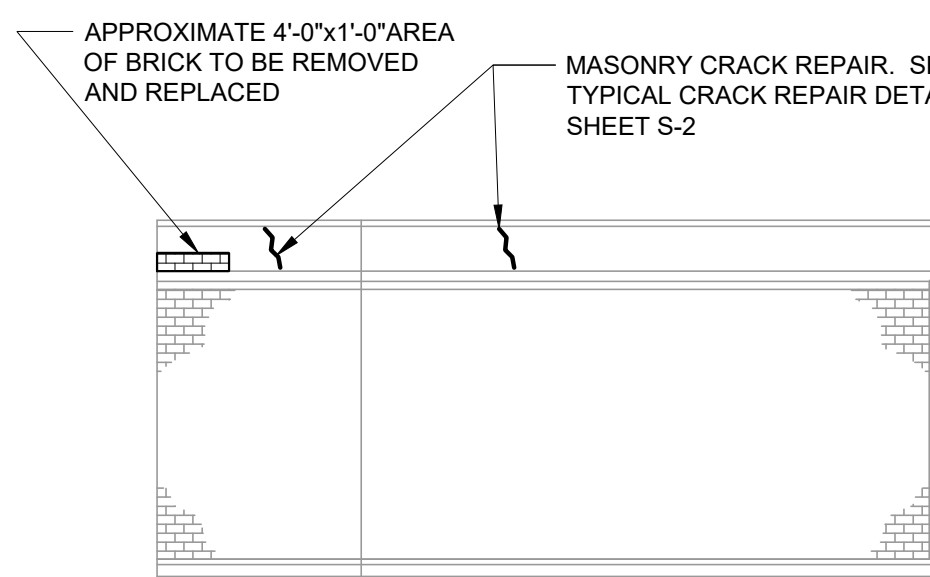
3 EAST ELEVATION
3/32"=1'-0"



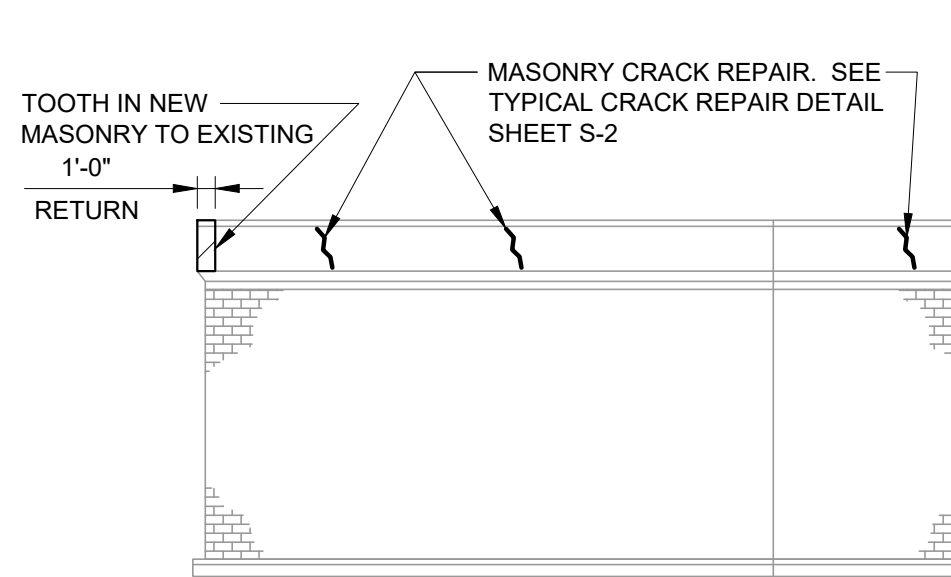
4 WEST ELEVATION
3/32"=1'-0"



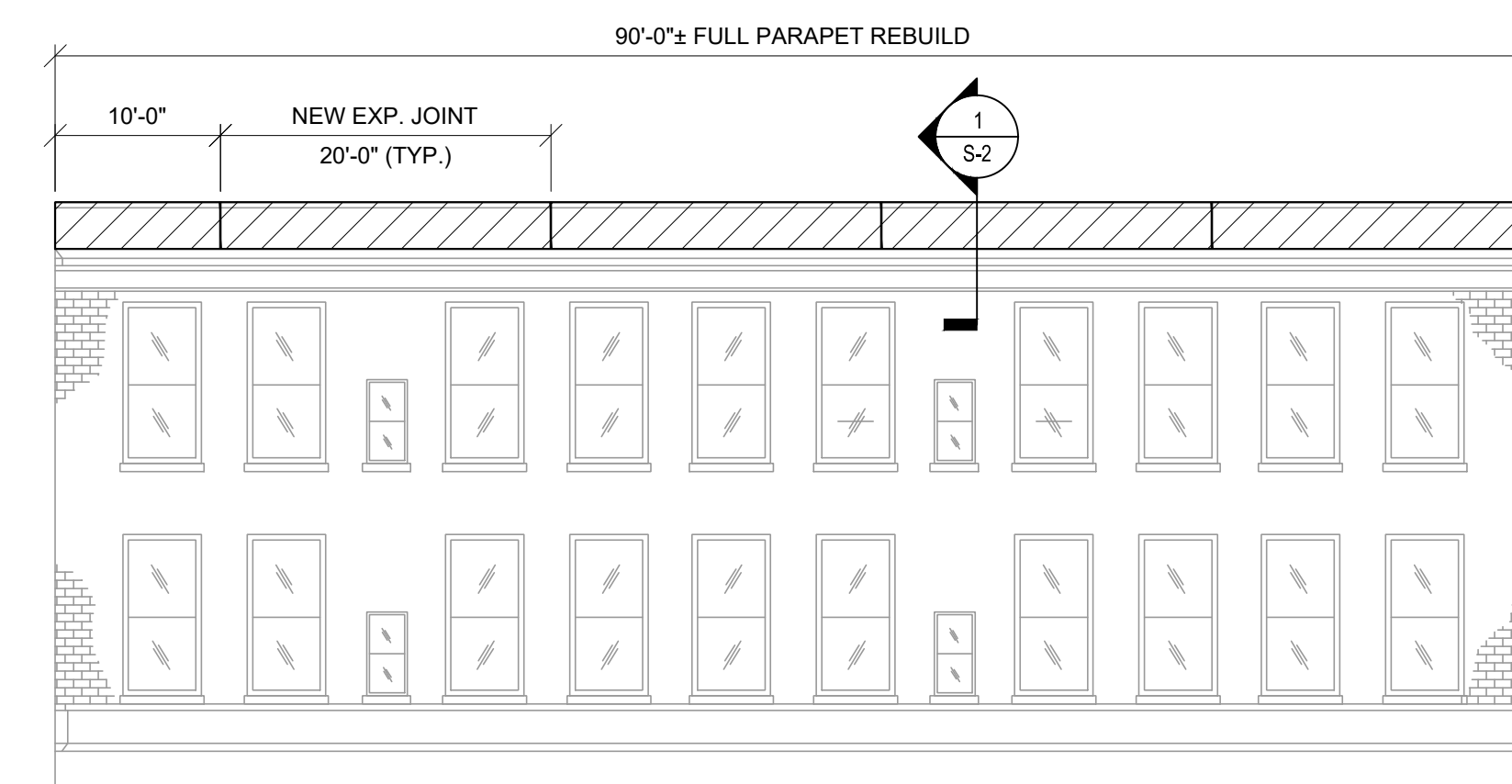
5 INTERIOR EAST ELEVATION
3/32"=1'-0"



6 INTERIOR EAST ELEVATION CONT.
3/32"=1'-0"



7 INTERIOR WEST ELEVATION CONT.
3/32"=1'-0"



8 INTERIOR WEST ELEVATION
3/32"=1'-0"

CONSTRUCTION SHALL BE COMPLETED IN PHASES AS FOLLOWS:

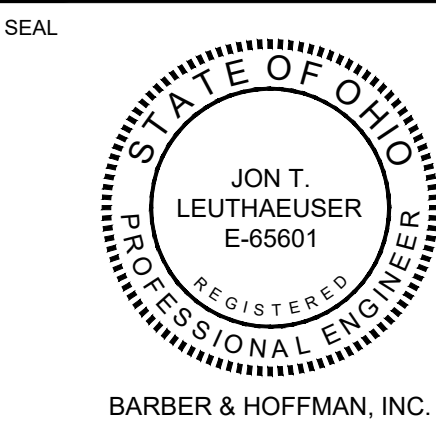
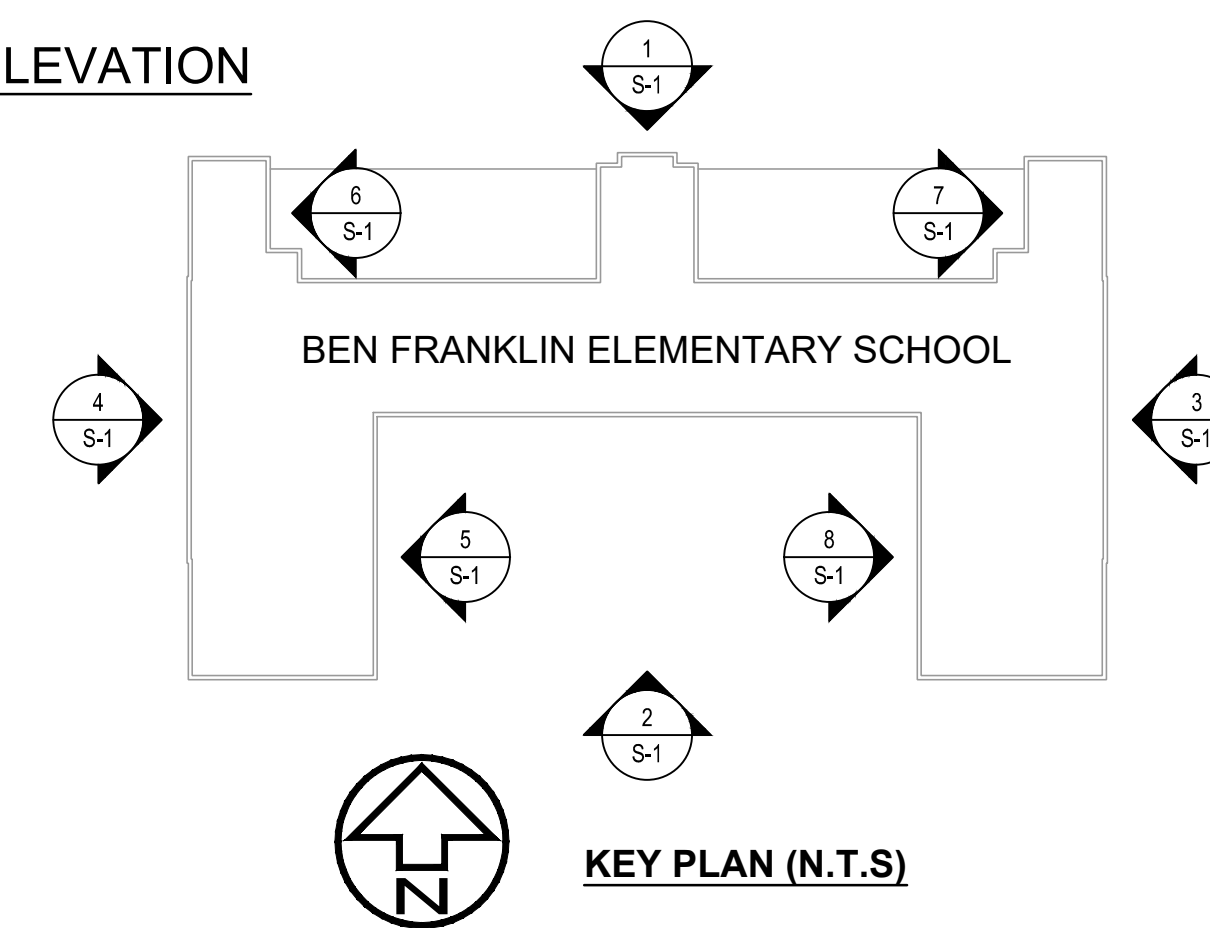
- PHASE 1 - ELEVATIONS 1, 2, 3
PHASE 2 - ELEVATIONS 4, 5, 6, 7, 8

NOTES:

- ALL SKYWARD JOINTS ALONG PARAPET / WATER TABLE ARE TO BE REMOVED. INSTALL BACKER ROD AND SEALANT (4" 1,000 L.F.).
- UNDERSIDE OF ALL COPING STONES ARE TO BE FULLY TUCK POINTED.
- REMOVE ALL BLACK TAR AT BASE OF PARAPET AND WATER TABLE. APPLY NEW BLACK TAR IN KIND.
- SCUPPERS MAY BE ENCOUNTERED DURING DEMOLITION. CONTRACTOR TO REINSTALL SCUPPERS

LEGEND:

- BRICK MASONRY PARAPET TO BE REBUILT, SEE SECTION 1 AND PARAPET WALL REPAIR DETAIL.
- CRACKED BRICK REPAIR
- NEW 1/2" VERTICAL EXPANSION JOINT IN MASONRY PARAPET



BARBER & HOFFMAN, INC.
Consulting Engineers

2217 East 9th Street, Suite 350
Cleveland OH 44115-1257
216-875-0100/ (F) 216-875-0111
barberhoffman.com

PROJECT NAME
**BEN FRANKLIN
ELEMENTARY SCHOOL
PARAPET REBUILD AND
RENOVATIONS**

PROJECT ADDRESS
**1905 SPRING ROAD
CLEVELAND, OH 44109**

| NO. | DATE | DESCRIPTION |
|-----|------------|------------------|
| 1 | 09/11/2020 | FOR PRICING |
| 2 | 06/27/2022 | FOR CONSTRUCTION |

| | |
|----------------|----------|
| DRAWN BY | CJS |
| CHECKED BY | MAM |
| DRAWING SCALE | AS NOTED |
| PROJECT NUMBER | 20023 |

DRAWING TITLE
ELEVATIONS

DATE
SEPTEMBER 11, 2020

DRAWING NUMBER

S-1

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Part III: Bid Cost Form

ITB #21370 - BENJAMIN FRANKLIN ELEMENTARY PARAPET REBUILD AND RENOVATIONS – RE-BID

The Bidder proposes to furnish all labor, materials, and equipment necessary to complete the **Benjamin Franklin Elementary Parapet Rebuild and Renovations – Re-Bid**. The undersigned proposes to provide services to rebuild and renovate the parapet wall including repointing masonry joints, masonry crack repair, and sealant installation at skyward joints at the Ben Franklin Elementary School. The Cleveland Metropolitan School District is also proposing to remove windows in the window well on East side of building and infill the window well to grade. for Cleveland Metropolitan School District in accordance with the Specifications and to the entire satisfaction of, and acceptance by, the District and for the following prices.

The Agreement will begin **April, 2023** pending authorization of funds at the discretion of the District.

The Bidder submitting this form agrees to perform all work described with the bid documents for the following unit prices:

1.1 Bid Information

- A. Bidder: _____
- B. Prime Contact: _____
- C. Project Name: Benjamin Franklin Elementary Parapet Rebuild and Renovations – Re-Bid
- D. Project Location: 1905 Spring Road Cleveland, Ohio 44109
- E. Owner: Cleveland Municipal School District
- F. Owner Project Number: _____
- G. Engineer: Barber & Hoffman Inc.
- H. Engineer Project Number: 20023

1.2 Bid Form Supplement

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder proposes the amounts below be added to or deducted from the Contract Sum on performance and measurement of the individual items of Work.
- C. If the unit price does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."

1.3 Unit Prices

A. Unit-Price No. 1: Parapet Rebuild.

_____ dollars (\$_____) per unit.

B. Unit-Price No. 2: Re-pointing of Masonry Joints.

_____ dollars (\$_____) per unit.

C. Unit-Price No. 3: Masonry Crack Repair.

_____ dollars (\$_____) per unit.

D. Unit-Price No. 4: Sealant Installation at Skyward Joints.

_____ dollars (\$_____) per unit.

1.4 Submission of Bid Supplement

A. Respectfully submitted this _____ day of _____, 2022.

B. Submitted by:

(Insert name of bidding firm or corporation).

C. Authorized Signature:

(Handwritten signature).

D. Signed by:

(Type or print name).

E. Title:

(Owner/Partner/President/Vice President).

Bidder Acknowledgment of All Addenda _____ No of Addendum: _____

The Bidder submitting this form agree to perform all work described within the Contract Documents for the following Price:

Informal Bid Total \$ _____

By signature acknowledgment the undersigned acknowledges full knowledge of the existing site conditions, plans, specifications and proposed work and warrants that the cost proposed is sufficient for the entirety of the scope contemplated within the contract documents including any miscellaneous items or work not specifically identified, but common to the performance of said work. Likewise these unit prices may be made for the reasonable extension and unlimited deduction of work in calculating change orders associated with such scope modifications.

Bidder acknowledges Owner reserves the right to reject any or all bids.

Bidder acknowledges failure by Bidder to Contract for said services will result in forfeiture of the Bid Security.

Bidder Acknowledges **Completion Date of Substantial Completion Date 30 Days from Notice to Proceed, Restoration Completion 45 Days from Notice to Proceed.**

Bidder Acknowledges **Liquidated Damages of \$800 per day** will apply.

Evidence of Authority to Sign must be attached/affixed and attested by Secretary of Corporation

Vendors are required to complete the signatory section below.

Company Name: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____ Fax Number: _____

Email Address: _____

Signature: _____

Printed Name: _____

Date: _____

Appendix A: District Related Forms
Addendum Acknowledgement Form for ITB #21370

Having read and examined the Request for Proposal Documents, including the specifications, prepared by the Cleveland Metropolitan School District for the above-referenced Project, and the following Addenda:

Addendum Number

Date of Receipt

Bidder:_____.

The undersigned Vendor proposes to perform all work for the applicable contract, in accordance with the contract document for the proposed sums.

Failing to acknowledge a published Addendum may cause your bid to be rejected.

Signature:_____ Date:_____

Certificate of Debarment



Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primary Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 13 CFR Part 145. The regulations were published as Part VII of the May 26, 1988 *Federal Register* (pages 19160-19211). Copies of the regulations are available from local offices of the U.S. Small Business Administration.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

- (1) The prospective primary participant certifies to the best of its knowledge and belief that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective primary participant shall attach an explanation to this proposal.

Business Name _____

Date _____

By _____
Name and Title of Authorized Representative

Signature of Authorized Representative



Certificate of Debarment Pg. 2

- 2 -

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.
4. The prospective primary participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations (13 CFR Part 145).
6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the ineligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Conflict of Interest Form

Statement of Potential Conflicts of Interest

| | |
|--------------|------------------|
| Vendor Name: | Primary Contact: |
| Address 1: | Telephone #: |
| Address 2: | Fax #: |
| City: | Email: |
| State, Zip: | Website: |

Cleveland Metropolitan School District (CMSD) adheres to Ohio Ethics Law and strictly follows the opinion of the Ohio Ethics Commission. As such, each vendor is requested to submit this statement declaring any potential conflicts of interest in doing business with the District. Please answer the following two questions providing all requested information.

1. Are any current Cleveland Metropolitan School District (CMSD) employees, Cleveland Board of Education members, or any of their immediate family members, also members of the vendor's board of directors, hold any officer position with the vendor, or own any shares of any stock issued by the vendor?

Yes_____ No_____

If **Yes**, and if the CMSD employee, CMSD board member, or immediately family member is a member of the vendor's board of directors or holds an office with the vendor, please state the person's name and position with the vendor.

Name: _____

Position: _____

If **Yes**, and if the CMSD employee, CMSD board member, or immediate family member owns share of any stock in the vendor organization or company, state the percentage of all outstanding company shares owned by the CMSD employee or board member.

_____ %

2. Are any current CMSD employees, CMSD board members, or any immediate family members also employees of the vendor?

Yes_____ No_____

If **Yes**, please state the person's name and provide a description of their job duties for the provider:

Name: _____

Job Duties: _____

If **Yes**, please describe the contact that the vendor will have with the CMSD employee or CMSD board member in the course of providing services to the District:

CERTIFICATION

I do hereby certify that the foregoing statements are true and accurate, and that my signature below attests to the authenticity of my identity as the person actually signing this form. This document is not a contract. In order for a binding Agreement to exist, a signed Agreement will be required prior to any legally binding commitment by the District.

NOTARIZED STATEMENT

_____ being duly sworn and deposes says

That he/she is the _____ of
(title)

_____, and answers to all the
(organization)
foregoing questions and all statements therein contained are true and correct.

(signature)

Subscribed and sworn before me this ____ day of _____, 20____

Notary Public: _____

My commission expires: _____

Bidder Qualifications Form

Bidder must answer all questions or attach a written explanation for each question.

PROPOSER NAME: _____

ADDRESS: _____

CITY; STATE: _____ ZIP: _____

CONTACT PERSON: _____

TITLE: _____

TELEPHONE: () _____ TOLL FREE: () _____

TAXPAYER IDENTIFICATION NUMBER: _____

1. What type of organization? (i.e. corporation, partnership, etc.)
2. How many years has your organization been in business?
3. How many years has your organization been in business under its current name?
4. List any other aliases your organization has utilized in the last two years and the form of Business
5. If you are currently a corporation, list the following:
 - a. State of incorporation
 - b. Date of incorporation
 - c. President's name
 - d. Secretary's name
 - e. Treasurer's name
 - f. Statutory agent's name
 - g. Name of shareholders, if less than 10
 - h. Principal place of doing business

6. If you are currently in a partnership, list the following:
 - a. Name and address of all general and limited partners.
 - b. Original name and date of organization's inception
7. If you are neither a corporation nor a partnership, please describe your organization and list principals.
8. Are you legally qualified to do business in the State of Ohio?
9. Are you legally qualified to do business in Cuyahoga County and licensed by the City of Cleveland?
10. Has your organization ever been (i) declared by a customer to be in default under a contractor and/or (ii) sued by a customer for failure to completely a contract or properly perform services in a timely manner? If yes, please state where, when, and why.
11. Has your organization ever been cited by a local, county, state, or federal authority for violation of a regulation or statute or failing to timely complete a contract in accordance with specifications? If yes, please state date, agency, and final disposition.
12. Has your organization ever filed for bankruptcy? If yes, please state where, when and why?
13. On a separate sheet, list the major customers for whom your organization has provided this type of equipment or service in the past five years. Include owner's name and type of work performed.
14. Has your organization ever been sued by a supplier for failure to timely pay for materials or equipment provided? If yes, please provide details.
15. What is the dollar limit of your firm's General (CLS) Liability Insurance?

Name of insuring company: _____

Policy number: _____
16. What is the dollar limit of your firm's Automotive Liability Insurance?

Owned vehicles _____

Non-Owned vehicles _____

Name of insuring company_____

Policy number_____

17. List the name and address of every person having an interest in this ITB.

18. Has any federal, state or local government entity ever cited or taken any action against your organization or any of its principals for failure to pay or remit any taxes including but not limited to income, withholding, sales, franchise, or personal property taxes? If yes, please give name of agency, date and amount of taxes overdue and resolution of the issue.

19. Is your organization and its' principals current in payment of personal property taxes?

20. The prospective lower tier participant certifies, by submission of this ITB, that neither it nor its principals is presently debarred, suspended, proposed, for debarment or suspension, declared ineligible, or voluntarily excluded from participation in this transaction by any State and/or Federal Department or Agency.

21. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participants shall attach an explanation to this ITB.

Notarized Statement

_____ being duly sworn and deposes says
that he/she is the _____ of
(title)

_____, and answers to all the
(organization)
foregoing questions and all statements therein contained are true and correct.

(signature)

Subscribed and sworn before me this _____ day of _____, 20____

Notary Public: _____

My commission expires: _____

Non-Collusion Affidavit

This Affidavit must be executed and shall accompany the proposal in order for the proposal to be considered.

NON-COLLUSION AFFIDAVIT State of Ohio, Cuyahoga County

_____, being first duly sworn, deposes and says that

he/she is _____ of _____

of the party making the foregoing proposal; that such proposal is genuine and not collusive or sham; that said proposer has not colluded, conspired, connived, or agreed, directly or indirectly, with any proposer or person, to put in a sham proposal, or that such other person shall refrain from proposing, and has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the proposal price of affiant or any other proposer, to fix any overhead, profit or cost element of said proposal price, or of that of any proposer, or to secure any advantage against the Board of Education of the Cleveland Metropolitan School District, or any person or persons interested in the proposal; and that all statements contained in said proposal are true; and further that such proposer has not, directly or indirectly, submitted this proposal, or the contents thereof, or divulged information or data relative thereto to any Association or to any member or agent thereof.

Affiant

Sworn to and subscribed before me this ____ day of _____, 20__.

Notary Public in and for Cuyahoga County, Ohio

My commission expires: _____

Diversity Business Enterprise Forms

Information about the District's Diversity Business Enterprise Program can be found at <https://bit.ly/3wvVApK>.

DBE Form A

Name of Firm: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Type of Business (Product or Service): _____

Date of Proposed Contract Award: _____

Amount of Proposed Contract Award: _____

Diversity Business Enterprise Subcontractor(s):

Dollar Amount Subcontract Award: _____

Percent of Subcontract Award: _____

D.B.E. Participation: _____ \$ _____

F.B.E. Participation: _____ \$ _____

Name of EEO Officer: _____

(Signature of owner, partner, or authorized officer)

Name: _____ Dated: _____
(printed)

Title: _____

DO NOT COMPLETE BELOW THIS LINE

___ Compliant ___ Compliance Pending ___ Non-Compliant

Compliance Date: _____

(signature, DBE Department) (date)

DBE Form B

NOTICE OF REQUIREMENT TO ENSURE DIVERSITY BUSINESS ENTERPRISE (DBE) OPPORTUNITY

Note: All eligible proposers for award of the contract should comply with the Requirements, Terms, and Conditions of this Notice.

The undersigned proposer hereby agrees that the goal it has established for DBE participation in this project through either subcontracting or entering into a joint Venture with DBEs in conformity with the Requirements. Terms and Conditions of this Notice is a goal of thirty (30%) percent for a construction/repair/ maintenance contract, twenty (20%) percent for a supply contract, and fifteen (15%) for a service contract of the total contract amount of this project. In no event will the absence of goals as stated above be deemed as compliance with the requirements, terms and conditions of this notice.

In addition, the undersigned will complete and attach hereto the DBE (Form C) Schedule for DBE participation, showing all DBE/FBE that will participate as subcontractors or joint ventures in this contract and a DBE (Form D), DBE Letter of Intent form for each DBE/FBE listed on the Schedule.

Proposer: _____

Date: _____

By: _____

Title: _____

Definition of DBE: A Diversity Business Enterprise (DBE)

"Small Diversity business concern" means a small business concern that is at least (51) percent unconditionally owned by one or more individuals who are both socially and economically diverse, or a publicly owned business that has at least (51) percent of its stock unconditionally owned by one or more socially and economically diverse individuals and that has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least (51) percent unconditionally owned by an economically diverse Indian tribe or Native Hawaiian Organization, or a publicly owned business that has least (51) percent of its stock unconditionally owned by one of these entities, that has its management and daily business controlled by members of an economically diverse Indian tribe or Native Hawaiian Organization.

DBE Form C

SCHEDULE MBE/FBE PARTICIPATION

Project Name: _____

Name of Non-DBE Contractor: _____

Identification Number: _____

Location: _____

Name of Minority Contractor: _____

Address: _____

City, State, Zip: _____

Type of work to be performed and work hours involved:

Projected commencement and completion dates for work:

Agreed price in dollars or percentage:

The undersigned will enter into a formal agreement with DBE for work listed in this schedule conditioned upon execution for a contract with the Cleveland Municipal School District

TO BE RETURNED WITH THE PROPOSAL

Signature of Non-DBE Prime Contractor

Date: _____

DBE Form D

DBE LETTER OF INTENT

To: _____
Non-DBE Prime or General Proposer

Project: _____

NON-DBE PRIME OR GENERAL PROPOSER

The Undersigned intends to perform work in connection with the above-referenced project as (check one):

☐ an individual ☐ a corporation ☐ a partnership ☐ a joint venture

DBE status of the undersigned is confirmed in the Cleveland Municipal School District's DBE file of bona fide enterprises with a certification date of: _____

The Undersigned is prepared to perform the following described work in connection with the above referenced project. Specify in detail particular work items or parts thereof to be performed:

at the following price or percent of contract: \$ _____

You have projected the following commencement date of such work, and the undersigned is projecting completion of such work as follows:

Items _____

Projected Commencement Date _____

Projected Completion Date _____

_____ % (percent) of the dollar value of the subcontract will be sublet and/or awarded to NON-DBE contractor (s) and/or NON-FBE SUPPLIERS. The undersigned will enter into a formal agreement for the above work with you conditioned upon your execution of a contract with the Cleveland Municipal School District.

Date

Name of DBE Firm (where applicable)

Signature of DBE (where applicable)

Signature of MBE Firm

(TO BE RETURNED WITH ITB)

Name of FBE Firm

Signature of FBE Firm

DBE Form E

DBE Unavailability Certification

I, _____,
Name Title

Of _____, certify that on _____
Date

I contacted the following DBE to obtain a Proposal for work items to be performed on:

Board Project: _____

Minority Contractor: _____

Work Items Sought: _____

Form of Proposal Sought: _____

Female Contractor: _____

Work Items Sought: _____

Form of Proposal Sought: _____

To the best of my knowledge and belief said minority business enterprise was unavailable (exclusive of the unavailability due to lack of agreement on price) for work on this project or unable to prepare a proposal for the following reason (s):

Signature, Non-DBE prime Proposer Date

_____ was offered an opportunity to proposal on the above-referenced work on
_____ by _____
Date Non-DBE Prime Proposer

Signature, Non-DBE Prime Proposer

The above statement is a true and accurate account of why I did not submit a Proposal on this project.

Signature, Non-DBE prime Proposer

DBE Form F

Non-Minority Prime Affidavit For DBE

STATE OF }
COUNTY OF } SS.

AFFIDAVIT

The undersigned swear that the foregoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each party in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual subcontract work and the payments thereof, and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the subcontract or those of each party relevant to the subcontract, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm: _____

Signature: _____

Name and Title: _____

Date: _____

STATE OF }
COUNTY OF } SS.

On this _____ day of _____, 20____, before me appeared _____

_____, to me personally known, who being duly sworn,

did execute the foregoing affidavit, and did state that they were properly authorized by _____

_____ to execute the affidavit and did so as their free act and deed.

(Seal)

Notary Public _____

Commission expires _____

DBE Form G

This form need not be completed if all joint venture firms are diversity business enterprises

1. Name of Joint Venture: _____
2. Address of Joint Venture: _____
3. Phone Number of Joint Venture: _____
4. Identify the firms which comprise this joint venture. (The DBE partner must complete DBE Form A or have current DBE Certification)

 - a. Describe the roll of the DBE firm in the joint venture: _____

 - b. Describe briefly the experience and business qualifications of each non-DBE Joint Venture: _____

5. Nature of Joint Venture's Business: _____

6. Provide a copy of the Joint Venture Agreement.
7. What is the percentage of DBE Ownership? DBE _____% FBE _____%
8. Ownership of Joint Venture: (This need not be completed if described in the Joint Venture agreement provided in response to question 6).
 - a. Profit and loss sharing: _____

 - b. Capital contributions, including equipment: _____

 - c. Other applicable ownership interest: _____

9. Control of and participation in this contract. Identify by name, race, and "firm" those individuals and their titles who are responsible for day-to-day management and policy decision making, including, but not limited to, those prime responsibility form:
 - a. Financial decisions: _____

b. Management decisions, such as:

- i. Estimating: _____
- ii. Marketing and Sales: _____
- iii. Hiring and firing of management personnel: _____

- iv. Purchasing of major items or supplies: _____

c. Supervision of field operations: _____

Note: If after complete the DBE Form B and before the completion of the joint venture's work on any contract awarded, there is any significant change in the information submitted, the joint venture must inform the Cleveland Municipal School District, either directly or through the non-DBE prime subcontractor if the joint vendor is a subcontractor.

DBE Form H

Non-Minority Prime Affidavit (Joint Venture)

STATE OF OHIO

CUYAHOGA COUNTY

AFFIDAVIT

The undersigned swear that the forgoing statements are correct and include all material information necessary to identify and explain the items and operation of our subcontract and the intended participation by each joint venture in the undertaking. Further, the undersigned covenant and agree to provide to the Cleveland Municipal School District current, complete, and accurate information regarding actual joint venture work and the payments thereof and any proposed changes in any of the subcontract arrangements and to permit the audit and examination of the books, records and files of the joint venture or those of each party relevant to the joint venture, by authorized representatives of the Cleveland Municipal School District. Any material misrepresentation will be grounds for terminating any contract which may be awarded and for initiating action under federal and state laws concerning false statements.

Name of Firm (Prime)

Name of Firm (DBE)

Signature

Signature

Name and Title

Name and Title

Date

Date

STATE OF

] COUNTY OF

]SS.

On this _____ day of _____ 20 __, before me appeared _____, to me personally known, who being duly sworn, did execute the foregoing affidavit, and did state that they were properly authorized by _____ to execute the affidavit and did so as their free act and deed.

(Seal)

Notary Public

Commission expires

EOA Contractual Declaration Forms

Information about the District's Affirmative Action Program can be found at <https://bit.ly/3wvVApK>.

Service Provider Contract Compliance Form

Name of Firm: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Standard Metropolitan Statistical Area: _____

Recruitment Area: _____

Type of Business (product or service): _____

Name of EEO Officer: _____

Signature of Owner, Partner, or Authorized Officer: _____

Name (type or print): _____

Date: _____ Title: _____

Do not complete below this line

Status of Vendor:

___ Compliance

___ Conditional Compliance

___ Non-Compliance

___ Compliance Pending

Comments: _____

Date: _____ Signature: _____

Compliance Declaration

The following must be filled out completely:

It is the policy of _____ that equal employment opportunity be afforded to all qualified persons without regard to race, religion, color, sex, national origin, age, or handicap.

In support of this policy, _____ will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, or handicap.

_____ will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to race, color, sex, national origin, age, or handicap. Such action will include, but not be limited to:

Recruitment, advertising, or solicitation for employment, hiring, placement, upgrading, transfer or demotion, selection for training including apprenticeship rates of pay or other forms of compensation, layoffs or termination.

The undersigned company states that they are of current applicable requirement pertaining to Fair Labor Standards and Non-Discriminatory Practices of Federal, State, and Local Governments.

The undersigned further acknowledges that if the contract is awarded to the undersigned, that the undersigned will comply with all Fair Labor Standard Practice.

(Name of Company)

_____ Date: _____

(Signature of Company Official)

STATE OF ()
COUNTY OF () SS.

BEFORE ME, a Notary Public in and for said County and State personally appeared the above-named Company _____ by _____

It's _____, who acknowledged that they knowingly signed the aforesaid instrument, and that the same is their free act and deed duly authorized and the free act and deed of said company.

IN TESTIMONY WHEREOF, I have hereto set my hand and affixed seal at

_____, _____, this

day of _____, 20____.

Employment Data Form

Please note this data may be obtained by visual survey or post-employment record. Neither visual surveys nor post-employment records are prohibited by any federal, state or local law. All specified data is required to be filled in by District policy.

| | All EMPLOYEES | | | MALES | | | | | FEMALES | | | | |
|----------------------------------|-----------------------------|-------|---------|---|---|---|---|----------|---|---|--|---|----------|
| Job Categories | TOALS MALES & FEMALES | MALES | FEMALES | WHITE (NOT OF HISPANIC ORIGIN) | BLACK (NOT OF HISPANIC ORIGIN) | ASIAN AMERICAN OR PACIFIC ISLANDER | AMERICAN INDIAN OR ALSKAN NATIVE | HISPANIC | WHITE (NOT OF HISPANIC ORIGIN) | BLACK (NOT OF HISPANIC ORIGIN) | ASIAN AMERICAN OR PACIFIC ISLANDE | AMERICAN INDIAN OR ALSKAN NATIVE | HISPANIC |
| OFFICIALS, MGRS & SUPERVISORS | | | | | | | | | | | | | |
| PROFESSIONALS | | | | | | | | | | | | | |
| TECHNICIANS | | | | | | | | | | | | | |
| SALES WORKERS | | | | | | | | | | | | | |
| OFFICE/CLERICAL | | | | | | | | | | | | | |
| CRAFTWORKERS (SKILLED) | | | | | | | | | | | | | |
| OPERATIONS (SEMI-SKILLED) | | | | | | | | | | | | | |
| LABORERS (UNSKILLED) | | | | | | | | | | | | | |
| SERVICE WORKERS | | | | | | | | | | | | | |
| APPRENTICES | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | |

Additional information (optional):

Describe any other actions taken which show that all employees are recruited, hired, or trained or promoted without regard to their race, religion, color, sex, handicap, age or national origin. Use second sheet if additional space is needed:

The undersigned certifies that they are legally authorized by the proposer to make the statements and representations contained in this report, and that they have read all of the foregoing statements and representations which are true and correct to the best of their knowledge and belief.

FIRM OR CORPORATE NAME: _____

DATE: _____

SIGNATURE: _____

TITLE: _____

References

Include below three references of equal or larger size to this current ITB project. Public sector experience is preferred, but not required. Please attach relevant supporting documentation, such as project plans, scope of work.

Reference #1:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax#: _____

Dates of Service: _____

Description of Services Provided: _____

Reference #2:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax #: _____

Dates of Service: _____

Description of Services Provided: _____

Reference #3:

Company/School Name: _____

Address: _____

Type of Business: _____

Contact Person: _____

Telephone and Fax#: _____

Dates of Service: _____

Description of Services Provided: _____

Appendix B: Service Provider Checklist

To assist service providers in the preparation of their proposals to ensure compliance with all document requirements

- ☐ Cover Page
- ☐ Transmittal Cover Letter, signed
- ☐ Table of Contents
- ☐ Bid Cost Form
 - ☐ Signatory
- ☐ District Related Forms
 - ☐ Addendum Acknowledgement, checked:
<https://www.clevelandmetroschools.org/purchasing> for any addendums
 - ☐ Certificate of Debarment
 - ☐ Conflict of Interest
 - ☐ Bidder Qualification Form
 - ☐ Non-Collusion Affidavit
 - ☐ DBE Forms- A, B, C, D, E, F, G, & H, for more information: <https://bit.ly/3wvVApK>
 - ☐ EOA Contractual Declaration Forms 1 &2, for more information: <https://bit.ly/3wvVApK>
 - ☐ Employment Data Form
 - ☐ References
- ☐ Bid Guaranty

Copies

- ☐ Original, marked
- ☐ Copies (1), marked
- ☐ USB Flashdrive