ADDENDUM NO. 1

January 7, 2022

Portage Township School - Portage High School Exterior Envelope Restoration
Portage IN, 46368

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated December 16, 2021 by Alliance Architects. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of page ADD 1-1 through ADD 1-2 and Addendum No. 1 from Alliance Architects dated January 6, 2022 and consisting of 1 page, Specification Section 04 01 05 - Masonry Cleaning, Specification Section 04 21 13 - Brick Unit Masonry, Specification Section 04 40 00 - Architectural Cast Stone, Specification Section 06 41 40 - Solid Surfacing, and 1 drawing.

A. **SPECIFICATION SECTION 00 00 20 - TABLE OF CONTENTS**

1. **Add:**

   a. Specification Section 04 01 05 - Masonry Cleaning
   b. Specification Section 04 21 13 - Brick Unit Masonry
   c. Specification Section 04 40 00 - Architectural Cast Stone
   d. Specification Section 06 41 40 - Solid Surfacing

B. **SPECIFICATION SECTION 00 43 50 - SUB AND PRODUCTS**

1. **Replace:**

   a. Specification Section 00 43 50 - Sub and Products with the attached revised section.

C. **SPECIFICATION SECTION 01 12 00 - MULTIPLE CONTRACT SUMMARY**

Under 3.03 Bid Categories make the following adjustments:

1. **BID CATEGORY NO. 1 - GENERAL TRADES**

a. **Add:**

1. Specification Section 04 01 05 - Masonry Cleaning
2. Specification Section 04 21 13 - Brick Unit Masonry
3. Specification Section 04 40 00 - Architectural Cast Stone
4. Specification Section 06 41 40 - Solid Surfacing

SECTION 00 43 50 - SUBCONTRACTORS AND PRODUCTS LIST

PART 1 - GENERAL

1.01 DESCRIPTION

A. The two (2) low responsive Bidders in each Bid Category shall furnish electronically, the following Subcontractors and Products List to the Construction Manager within **two (2) working days (48 hrs.)** of the bid due date and time. The blanks appropriate to the Bid Category(ies) on which they bid shall be completed.

1. The Owner and Architect shall have the right to select any material or equipment named in the Specifications for any particular item where the Bidder either fails to list same or lists more than one name for the item in question.
2. It is intended that this list will show the manufacturer and supplier of major items of work that will be subcontracted and to whom.
3. **List the value of all subcontracts. Subcontractors whose value is $300,000 or more must be qualified thru the Department of Administration.**

1.02 INSTRUCTIONS FOR SUBCONTRACTORS AND PRODUCTS LISTS

A. Each Bidder shall submit a copy of his list of subcontractors and manufacturers of products and equipment proposed for work indicated as required above.

B. The list shall be submitted on forms provided and shall be completely executed. "As Specified" or "With Equipment" type of terminology will not be accepted.

C. Under "Subcontractor", insert the name of the firm which the Bidder proposes to have perform the respective work. If work will be done by the Prime Bidder and no subcontract will be awarded, state "By Own Forces".

D. Submission does not constitute acceptance for use of listed manufacturers' products. Materials and subcontractors are subject to the provisions of the General Conditions and "Standard of Product Acceptability" and must be formally reviewed and adjudged acceptable by the Architect/Engineer.

E. Engineer, Architect and Owner reserve the right to reject submissions of materials, work, or subcontractors that do not, in their opinion, meet the requirements of Drawings, Specifications or job conditions.

F. Materials and subcontractors used for work on the Project shall be in accordance with accepted material list.

1. The list is intended to assure use of materials and vendors acceptably equivalent to those specified and is not a substitution sheet or complete listing of required materials or services.

2. Substitutions for listed items will not be allowed, except when termed acceptable, in writing by the Architect/Engineer, provided that substitution will result in a cost savings to the Owner , determined by the Owner to be a better product or is made necessary due to unavailability of listed item. Unavailability shall be confirmed in writing by manufacturer named on accepted list.

1.03 ARCHITECTURAL WORK SUBCONTRACTORS AND PRODUCTS LIST

BID CATEGORY NO._____

(Insert Category No. and Name)

NAME OF BIDDER_____

The undersigned hereby submits the following Subcontractors and Products List which becomes a part of the undersigned Contract proposal. Subcontractor purchased material, equipment, and labor shall be under the direct management and control of the Prime Contractor. If a dual listing of manufacturers and subcontractors is herein made, it is understood the Architect/Engineer (not the Contractor) will select the manufacturer or subcontractor of his choice.

ARCHITECTURAL WORK

Subcontractor/Manufacturer	Division 03 - Concrete		Value
	03 01 00	Concrete Repairs	
	03 01 01	Concrete Raisings	
	03 30 00	Cast-in-Place Concrete	

Subcontractor/Manufacturer	Division 04 - Masonry		Value
	04 01 05	Masonry Cleaning	
	04 21 13	Brick Unit Masonry	
	04 40 00	Architectural Cast Stone	

Subcontractor/Manufacturer	Division 05 - Metals		Value
	05 05 00	Miscellaneous Metals	

Subcontractor/Manufacturer	Division 06 - Carpentry		Value
	06 10 00	Rough Carpentry	
	06 41 40	Solid Surfacing	

Subcontractor/Manufacturer	Division 07 - Thermal and Moisture Protection		Value
	07 21 00	Building Insulation	
	07 24 00	Exterior Insulation and Finish System (EIFS)	
	07 60 00	Metal Fascia and Flashing	
	07 92 00	Joint Sealants	

Subcontractor/Manufacturer	Division 08 - Openings		Value
	08 45 00	Aluminum Glazed Storefront System	
	08 80 00	Glazing	

Subcontractor/Manufacturer	Division 09 - Finishes		Value
	09 21 10	Gypsum Board	
	09 91 00	Painting	
	09 98 00	Concrete Coating	

Name of Bidder:	Date:
Address:	
City/State/Zip:	
Telephone:	
By:	

END OF SECTION 00 43 50

ADDENDUM NO. 1

ALLIANCE
ARCHITECTS

RE: PORTAGE TOWNSHIP SCHOOLS
HIGH SCHOOL - EXTERIOR ENVELOPE RESTORATION
6450 US Highway 6
Portage, Indiana

DATE: January 6, 2022

TO: All Bidders

You are hereby directed to make the following changes in the Project Manual and/or Drawings of the subject job and each item shall become fully a part of the Construction Documents as if originally written and/or shown:

1. **CLARIFICATION**; A Microsoft OneDrive folder has been created and populated with additional photographs and record drawings to assist in bidding the work. The link below will open this folder for viewing:

   https://alliancearchitects-my.sharepoint.com/:f:/g/personal/amollison_alliarch_com/ErGtwldWzepOgFUjkjt653QBmH-_W0mC5B93IMaoMgcCDQ?e=tfY59x

2. **SPECIFICATIONS**; The following sections have been added (copies attached):

   04 01 05 MASONRY CLEANING
   04 21 13 BRICK UNIT MASONRY
   04 40 00 ARCHITECTURAL CAST STONE
   06 41 40 SOLID SURFACING

3. **DRAWINGS**; Sheet No. A2.1; EXTERIOR ELEVATIONS:

   a. SOUTH ELEVATION 1/A2.1; Revise Keynote 13 pointing to the roof coping to Keynote 8.

   b. NORTH ELEVATION 4/A2.1; Revise Keynote 13 pointing to the roof coping to Keynote 8.

4. **DRAWINGS**; Sheet No. A2.2; EXTERIOR ELEVATIONS; Add Detail 4/A2.2 Lower Courtyard Plan for masonry restoration at the planters in the courtyard.

5. **DRAWINGS**; Sheet No. A3.1; WALL SECTIONS; COPING DETAIL 6/A3.1:

   a. Terminate exterior insulation layer below Roof Coping Cleat.

   b. Extend "TREATED WOOD BLOCKING" to outside face of E.I.F.S. to allow for positive attachment of cleat fasteners.

END OF ADDENDUM NO. 1

All bidders must acknowledge receipt of this Addendum in their bid.

04 01 05 MASONRY RESTORATION AND CLEANING

A. General

1. Summary:

a. Section includes cleaning and sealing of existing masonry surfaces.
1) Refer to Drawings for locations.

2. Submittals:

a. Product Data:
1) Submit data on cleaning compounds and cleaning solutions.
2) Submit manufacturer's technical data for each product indicated, including recommendations for their application and use; include test reports and certifications substantiating that products comply with requirements.

b. Samples: Submit four samples of face brick, units to illustrate color, texture, and extremes of color range to match existing.

c. Restoration contractor shall visit the site and submit a written restoration plan and restorer's step-by-step written instructions tailored specifically for this Project.
1) Submit written plan of procedures and materials to be used in complying with this section, including written description of cleaning methods, spray working pressures, materials and equipment proposed for use in cleaning each type of masonry.
2) Elaborate on methods to be used to assure safety of building occupants and visitors to site; disposal plan including location of approved disposal site; and detailed description of methods to be employed to control pollution.

d. Submit letters to authenticate installer's required experience.

3. Quality Assurance:

a. Performance Requirements:
1) Perform work in accordance with MSJC Code and MSJC Specification.
2) Maintain one copy of each document on site.

b. Qualifications:
1) Manufacturer:
a) Company specializing in manufacturing products specified in this section with minimum five years experience.
b) Manufacturer capable of providing field service representation during construction and approving application method(s).
c) Installer: Company specializing in performing work of this section with minimum five years documented experience.

c. Mockup:
1) Clean a wall panel, 10' x 10' to determine extent of cleaning, cleaning methods and cleaning products.
a) Repeat, using same or different cleaning methods up to three different panels, until acceptable.

2) Location(s) shall be as directed by Architect.
   a) Allow waiting period of not less than seven calendar days after completion of each sample cleaning to permit study of sample areas for negative reactions.
   b) Written approval shall be obtained from the Architect on cleaning methods, spray working pressures, materials, equipment used, pre-soaking durations and mock-up areas before proceeding with general cleaning operations.
3) Acceptable panels illustrating results of restoration and cleaning will become standard for work of this section.

d. Pre-Installation Conference: Convene minimum one week prior to commencing work of this section.

4. Delivery, Storage and Handling:

a. Store restoration cleaner materials in manufacturer's packaging; keep containers tightly closed and away from open flames.

b. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

5. Project Conditions:

a. Environmental Requirements - Cleaning Operations:
   1) Do not apply at surface and air temperatures below 40°F or above 95°F unless otherwise indicated by manufacturer's written instructions.
   2) Do not apply when surface and air temperatures are not expected to remain above 40°F for a minimum of eight hours after application, unless otherwise indicated by manufacturer's written instructions.
   3) Do not apply under windy conditions, which would cause cleaning products or protective treatments to be blown onto adjacent unprotected surfaces.
   4) Do not apply to frozen substrate; allow adequate time for substrate to thaw, if freezing conditions exist before application.
   5) Do not apply consolidation or protective treatments earlier than 24 hours after rain or if rain is predicted for a period of 6 hours after application, unless otherwise indicated by manufacturer's written instructions.

b. Dispose of run-off from cleaning operations by legal means and in a manner which prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

6. Sequencing: Provide masonry restoration and cleaning materials and other construction in ample time to complete work in a timely manner.

B. Products

1. Masonry Restoration and Cleaning:

a. Cleaner Manufacturers:
   1) PROSOCO, Inc.
   2) Diedrich Chemicals Restoration Technology.

2. Compartments - Exterior Restoration and Cleaning:

   a. Restoration Cleaner - Brickwork: Clear liquid; 1.050 specific gravity; no flash point; 3.0 pH (at 1.5 dilution); 8.75 lbs. wt./gal.
      1) Basis-of-Design: Sure Klean Restoration Cleaner or Sure Klean Heavy Duty Restoration Cleaner by PROSOCO, Inc.; cleaner to be used in various locations shall be determined by mockups.

   b. Water for Cleaning: Clean, potable, free of oils, acids, alkalis, salts and organic matter.

   c. Brushes: Fiber bristle only.

C. Execution

1. Preparation:

   a. Verify surfaces to be cleaned and restored are ready for work of this section.
      1) Clean substrates of substances that interfere with penetration or performance of surface treatments.
      2) Test for moisture content and pH level, according to manufacturer's instructions, to ensure surface is prepared and dry to receive surface treatments.

   b. Protect elements surrounding work of this section from damage or disfiguration.

   c. Immediately remove stains, efflorescence, or other excess resulting from work of this section.

   d. Protect roof membrane and flashings from damage; lay 1/2" plywood on roof surfaces over full extent of work area and traffic route.

   e. Protection:
      1) Close off, seal, mask and board up areas, landscaping, materials and surfaces not receiving work of this section to protect from damage.
      2) Protect persons and motor vehicles surrounding building whose masonry surfaces are being restored and surrounding buildings from injury resulting from masonry restoration work.
      3) Protect glass, unpainted metal trim and polished stone from contact with acidic chemical cleaners by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape; apply masking agent to comply with manufacturer's recommendations; do not apply liquid masking agent to painted or porous surfaces.
      4) Protect unpainted metal from contact with alkali chemical cleaners by covering them either with liquid strippable masking agent or polyethylene film and waterproof masking tape.

   f. Construct dust proof and weatherproof partitions to close off occupied areas.

2. Cleaning Existing Exterior Masonry:

   a. Restoration Cleaning:
      1) Clean surfaces and remove large particles with wood scrapers or non-ferrous wire brush.

2) Unless otherwise indicated, dilute chemical cleaning materials with water to produce solutions of concentration indicated but not greater than that recommended by chemical cleaner manufacturer.
3) Brush coat brick masonry with restoration cleaner, mixed into solution identical to solution required for sample area.
4) Provide second application when required by preliminary test of sample area.
5) Allow sufficient time for solution to remain on masonry and agitate with soft fiber brush or sponge.
6) Rinse from bottom up with potable water applied at 400 to 600 psi and at rate of 4 gallons per minute; older, more delicate masonry may require restricting water pressure to avoid damage.

3. Field Quality Control:

a. Manufacturer's Field Services: Provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

b. Site Visits: Manufacturer's field service representative shall be required for Pre-installation Meeting, two visits during execution of work, and for a final inspection of completed work.

4. Cleaning:

a. As work proceeds and on completion, remove excess mortar, smears, droppings, using stiff nylon bristle brushes and clean water, spray applied at low pressure (40 psi maximum); metal scrapers or brushes shall not be used; acid or alkali cleaning agents shall not be used.

b. Remove temporary coverings and protection of adjacent work areas.

c. Clean surrounding surfaces.

d. Repair or replace damaged or deteriorated surfaces.

e. Remove construction debris from project site and legally dispose of debris.

END OF SECTION

04 21 13 BRICK UNIT MASONRY

A. General

Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1. Summary:

a. Section Includes:
1) Mortar
2) Face brick
3) Reinforcement, anchors, and ties
4) Masonry accessories
5) Thru-wall flashing

b. Related Items:
1) Concrete Unit Masonry: Refer to Section 04 22 00.
2) Architectural Stone: See Section 04 40 00.

2. References:

a. American Concrete Institute (ACI):
1) ACI 530/ASCE 5: Building Code Requirements for Unit Masonry.
2) ACI 530.1/ASCE 6: Specifications for Masonry Structures.

b. Brick Institute of America (BIA): Technical Notes on Brick Construction,

c. International Masonry Industry All Weather Council (IMIAC):
1) Recommended Practices for Cold Weather Masonry Construction.
2) Recommended Practices for Hot Weather Masonry Construction.

3. System Description:

a. System Performance Requirements: Provide unit masonry that develops the following installed net area compressive strengths for masonry: f'm = 2500 pi.

4. Quality Assurance:

a. Unit Masonry Standard: Comply with ACI 530.1/ASCE 6 "Specifications for Masonry Structures".

b. Single Source Responsibility for Masonry Units: Obtain exposed masonry units of uniform texture and color, or a uniform blend within ranges accepted for these characteristics, from one manufacturer for each different product required for each continuous surface or visually related surfaces.

c. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.

d. Bond Strength: For mortar in exterior walls provide bond strength of not less than 35 pounds per square inch between the mortar and the selected masonry unit.

e. Regulatory Requirements:
   1) Perform masonry work to comply with requirements of ACI 530.1 unless otherwise indicated.
   2) Perform work to comply with standards of:
      a) The Brick Institute of America.
      b) The International Masonry Institute.

5. Delivery, Storage and Handling:

   a. Storage and Protection:
      1) Store cementitious materials off ground, under cover and in a dry location. If units become wet do not install until units are in an air-dried condition.
      2) Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
      3) Store accessories including metal items to prevent corrosion and accumulation of dirt and oil.

6. Project Conditions:

   a. Protection of Masonry: During installation cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work and before start of inclement weather. Cover partially completed masonry when construction is not in progress.

   b. Stain Prevention: Prevent grout, mortar and soil from staining the face of masonry to be left exposed. Promptly remove grout, mortar, and soil that come in contact with such masonry.
      1) Protect base of walls from rain splashed mud and mortar splatter.
      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 and splatter.

   c. Cold Weather Construction: Comply with referenced masonry standards.
      1) Do not lay units that are wet or frozen.
      2) Remove masonry damaged by freezing conditions.

   d. Hot Weather Construction: Comply with referenced masonry standards.

B. Products

1. Mortar Materials:

   a. Portland Cement: ASTM C150, Type 1 or 2, except Type 3 may be used for cold-weather construction. Provide natural color as required to produce required mortar color.

   b. Masonry Cement: NOT ALLOWED.

   c. Hydrated Lime: ASTM C207, Type S.

   d. Sand: ASTM C144.

   e. Water: Clean, potable, and free of deleterious amounts of acids, alkalies and organic materials.

2. Clay Masonry Materials:

   a. Clay masonry materials shall be dimensioned as indicated. Provide special shapes indicated required for complete installation.

   b. Supply one of the following for each type of brick:
      1) Face Brick: Comply with ASTM C216, Grade - SW. Type FBX.
         a) Manufacturer and color range to match existing.
         b) Actual Size: Modular 3-5/8" x 2-1/4" x 7-5/8" (4" x 8" nominal).

3. Reinforcement, Anchors and Ties:

   a. Basis of Design: Corrugated wall tie as manufactured by Hohmann & Barnard.

   b. Subject to Compliance with Requirements: Provide comparable products (as determined by Architect) by one of the following manufacturers:
      1) AA Wire Products Company.
      2) Dur-O-Wal, Inc.
      3) Heckman Building Products Inc.
      4) Hohmann & Barnard, Inc.
      5) Masonry Reinforcing Corporation of America.

4. Accessories:

   a. Backer Rods and Sealants: Specified under Section 07 92 00.

   b. Weep System:
      1) 3/8" cotton rope wicks (nylon or polyethylene is not acceptable).
      2) Thru-wall Flashing: 40-mil membrane consisting of rubberized asphalt bonded to high density polyethylene film. Reference Standard: Perm-A-Barrier by Grace Construction Products.

   c. Bituminous Plastic Cement: Conform to Fed. Spec. SS-C-153C. Type 1,

   d. Cleaning Materials: Detergent type brick cleaner designed for washing down new brick surfaces consisting of a solution of 1/2 cup trisodium phosphate and 1/2 cup laundry detergent dissolved in one gallon of water.

   e. Adjustable concealed masonry arch lintel system by Halfen Anchoring systems, Converse TX. Provide stainless steel lintel with mid-span supports, brackets, stitching rods, and other required components.

5. Mixes:

   a. Mortar for tuckpointing, repair or replacement of existing masonry shall comply with ASTM C270, Proportion Specifications, Type S, except limit materials to those specified herein. All mortar shall obtain a minimum average compressive strength of 1,500 psi at 28 days.
      1) Types M and N mortar may not be substituted.

   b. Mortar Color: Match existing building.

   c. Mortars shall be machine mixed in an approved type of mixer in which the quantity of water can be accurately and uniformly controlled.

d. All cementitious materials and aggregate shall be mixed for at least 5 minutes in a mechanical batch mixer with the maximum amount of water to produce a workable consistency. Hand mixing shall not be used unless approved by the Engineer.

e. Measure and batch materials either by volume or weight such that the required proportions for mortar can be accurately controlled and maintained. Measurement of sand exclusively by shovel will not be permitted.

f. The mortar mix shall be strictly controlled to assure uniformity of color and texture throughout the work.

g. Mortar which has begun to set or is not used within 2 hours after initial mixing or which has lost its required plasticity shall be discarded. Retempering of mortar shall not be allowed.

h. Anti-freeze admixtures, chemical bonding agents or air entraining agents will not be allowed to be in the mortar.

i. Calcium chloride shall not be used in mortar.

j. No admixtures will be allowed in mortar without the Engineer's written permission.

C. Execution

1. Tuckpointing and Brick Replacement:

a. Where cracks extend through mortar joints and where shown on Drawings, repair as follows:
   1) Cut out mortar joints with cracks to be repaired a minimum of 2-1/2 times the joint thickness from the exterior face of the masonry or back to stable, sound mortar whichever is greater. Take care to not score face of existing masonry. All joints that have been cut out shall be washed down with clean water and blown out with compressed air to ensure that all debris is removed from joints to be pointed. Prior to pointing, all joints shall be dampened with clean water to prevent premature drying of pointing mortar. Care shall be taken that no free water or excessive dampness is present.
   2) Tuckpoint in layers not to exceed 1/2" maximum in depth. Each layer shall be thumbprint hard before the next layer is applied. Repeat procedure as required to final depth to match existing mortar joint. Tool as required.
   3) Following tooling, remove excess mortar from the edge of joints with a bristle brush.
   4) Any areas that check, crack or pull out will be removed and replaced until approved by the Owner's Representative.
   5) Clean masonry and mortar joints as required after a minimum set time of 7 days.

b. Where cracks extend through brick repair as follows:
   1) Carefully cut out mortar around brick to be removed with a 4" hand held grinder taking care not to cut, score or otherwise damage any adjacent masonry.
   2) Complete removal of the brick with hand tools cleaning all exposed brick faces free of mortar. Do not cut steel shelf angles.
   3) Install replacement brick completely pointing all joints full of mortar and tool to match the existing joint profile. New brick shall be anchored to its respective substrate with supplemental anchors at a maximum spacing of 16" o.c., horizontally and vertically if more than four new brick are placed adjacent to each other.
   4) Clean after a minimum of 7 days with specified material in accordance with manufacturer's printed literature.

2. Cleaning:

   a. Thoroughly clean equipment used in mixing, transporting, and installing mortar, at end of each working day.

   b. Dry brush masonry surface after mortar has set at end of each day's Work. Dry brush pointed masonry. Clean exposed unglazed masonry with stiff brush and clear water. If cleaning by water does not produce satisfactory results, apply cleaning agent to a 20 square foot sample area as selected. Do not proceed with cleaning until sample area is acceptable. Protect other materials from damage by cleaning operations. Leave work and surrounding surfaces clean and free of mortar spots, droppings, and broken masonry.

   c. At a time near completion of work, clean exposed masonry surfaces and mortar joints.
      1) Remove excess mortar, mortar stains, efflorescence, etc. to provide uniform appearing job.
      2) Materials and Methods of Cleaning: As recommended by BIA and masonry material manufacturer, and as specified herein.
      3) Protect other work. Take special care to protect aluminum products to prevent staining and damage.

3. Protection: Protect sills, ledges, and offsets from mortar droppings or other damage during construction. Remove misplaced mortar or grout immediately. Protect face materials from staining.

END OF SECTION

04 40 00 ARCHITECTURAL CAST STONE

A. General

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1. Related Sections:

   a. Section 04 21 13 BRICK UNIT MASONRY.
   b. Section 07 92 00 JOINT SEALANTS.

2. Summary:

   a. Cast stone cap.
   b. Units to be mortar set with sealant pointed joints.

3. Submittals:

   a. Product Data: Submit manufacturer's detailed technical data including the following:
      1) Detailed specifications of construction and fabrication
      2) Manufacture's installation instructions

   b. Shop Drawings: Submit manufacturer's shop drawings including profiles, cross sections, reinforcement, exposed faces, arrangement of joints (optional for standard or semi-custom installations), anchoring methods, anchors (if required), annotation of stone types and their location.

   c. Samples: Submit pieces of cast stone that are representative of the general range of finish and color proposed to be furnished for the project.
      1) Size: 8" x 8"
      2) Sealant samples for each type and color of joint sealant required.

   d. Warranty: 10-year warranty.

4. Quality Assurance:

   a. Manufacturers Qualifications: Not less than 10 years experience in architectural cast stone.

   b. Installers Qualifications:
      1) Firm experienced in systems similar in complexity to those required for this project.
      2) Firm has successfully completed a minimum of 5 comparable scale projects using this system.

   c. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.

   d. Source Limitations for Cast Stone: Obtain cast stone units through single source from single manufacturer.

   e. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color, from one manufacturer for each cementitious component and from one source or producer for each aggregate.

B. Products

1. Manufacturers:

a. Comply with ASTM C1364 - Standard Specification for Architectural Cast Stone.

b. Manufacturer: Subject to compliance with requirements, provide partitions from one of the following manufacturers:
   1) Custom Cast Stone, Inc., Westfield, Indiana
   2) Edwards Cast Stone, Dubuque, Iowa
   3) Precast Specialties, Fort Wayne, Indiana
   4) Architectural Precast, Chicago, Illinois
   5) Continental Cast Stone, Kansas City, Missouri

2. Cast Stone Requirements:

a. Provide cast stone units complying with ASTM C1364 using either the vibrant dry tamp or wet-cast method.

b. Provide units that are resistant to freezing and thawing as determined by laboratory testing according to ASTM C666/C666M, Procedure A, as modified by ASTM C1364.

c. Fabricate units with sharp arris and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.
   1) Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
   2) Provide raised fillets at backs of sills and at ends indicated to be built into jambs.
   3) Provide drips on projecting elements unless otherwise indicated.

d. Fabrication Tolerances:
   1) Variation in Cross Section: Do not vary from indicated dimensions by more than 1/8".
   2) Variation in Length: Do not vary from indicated dimensions by more than 1/360 of the length of unit or 1/8", whichever is greater, but in no case by more than 1/4".
   3) Warp, Bow, and Twist: Not to exceed 1/360 of the length of unit or 1/8", whichever is greater.
   4) Location of Grooves, False Joints, Holes, Anchorages, and Similar Features: Do not vary from indicated position by more than 1/8" on formed surfaces of units and 3/8" on unformed surfaces.

e. Cure units as follows:
   1) Keep units damp and continue curing to comply with one of the following:
   2) No fewer than six days at mean daily temperature of 60°F or above.

f. Acid etch units after curing to remove cement film from surfaces to be exposed.

g. Color and Texture: Provide units with fine-grained texture and buff color resembling Indiana limestone as selected by Architect.

3. Mortar Materials:

a. Portland Cement: ASTM C150, 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.

b. Hydrated Lime: ASTM C207, Type S.

c. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

d. Aggregate for Mortar: ASTM C144.
   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" thick, use aggregate graded with 100% passing the No. 16 sieve.

e. Water: Potable.

4. Accessories:

   a. Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A240/A240M, ASTM A276, or ASTM A666.

   b. Dowels: ½" diameter, round bars, fabricated from Type 304 stainless steel complying with ASTM A240/A240M, ASTM A276, or ASTM A666.

   c. 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 cast stone manufacturer and expressly approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.
      1) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         a) Diedrich Technologies, Inc.
         b) EaCo Chem, Inc.
         c) ProSoCo, Inc.

5. Mortar Mixes:

   a. Do not use admixtures including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless approved by Architect
      1) Do not use calcium chloride in mortar or grout.
      2) Use portland cement-lime mortar unless otherwise indicated.

   b. Comply with ASTM C270, Proportion Specification.
      1) For setting mortar, use Type N.
      2) For pointing mortar, use Type N.

6. Source Quality Control:

   a. Engage a qualified independent testing agency to sample and test cast stone units according to ASTM C1364.
      1) Include one test for resistance to freezing and thawing.

C. Execution

1. Examination:

a. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

b. Proceed with installation only after unsatisfactory conditions have been corrected.

2. Setting Cast Stone in Mortar:

a. Set cast stone as indicated on Drawings. Set units accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.
   1) Install anchors, supports, fasteners, and other attachments indicated or necessary to secure units in place.
   2) Coordinate installation of cast stone with installation of flashing specified in other sections.

b. Wet joint surfaces thoroughly before applying mortar or setting in mortar.

c. Set units in full bed of mortar with full head joints unless otherwise indicated.
   1) Set units with joints 1/4" to 3/8" wide unless otherwise indicated.
   2) Build anchors and ties into mortar joints as units are set.
   3) Fill dowel holes and anchor slots with mortar.
   4) Fill collar joints solid as units are set.
   5) Build concealed flashing into mortar joints as units are set.
   6) Keep head joints in coping and other units with exposed horizontal surfaces open to receive sealant.
   7) Keep joints at shelf angles open to receive sealant.

d. Rake out joints for pointing with mortar to depths of not less than 3/4". Rake joints to uniform depths with square bottoms and clean sides. Scrub faces of units to remove excess mortar as joints are raked. Prep joint for selanat.

e. Reference Specification Section 07 92 00 JOINT SEALANTS.

f. Provide sealant joints at copings and other horizontal surfaces, at expansion, control, and pressure-relieving joints, and at locations indicated.
   1) Keep joints free of mortar and other rigid materials.
   2) Build in compressible foam-plastic joint fillers where indicated.
   3) Form joint of width indicated, but not less than 3/8".
   4) Prime cast stone surfaces to receive sealant and install compressible backer rod in joints before applying sealant unless otherwise indicated.
   5) Prepare and apply sealant of type and at locations indicated to comply with applicable requirements in Section 07 92 00 JOINT SEALANTS.

3. Installation Tolerances:

a. Variation from Plumb: Do not exceed 1/8" in 10', 1/4" in 20', or 1/2" maximum.

b. Variation from Level: Do not exceed 1/8" in 10', 1/4" in 20', or 1/2" maximum.

c. Variation in Joint Width: Do not vary joint thickness more than 1/8" in 36" or one-fourth of nominal joint width, whichever is less.

d. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/16", except where variation is due to warpage of units within tolerances specified.

4. Adjusting and Cleaning:

a. Remove and replace stained and otherwise damaged units and units not matching approved Samples. Cast stone may be repaired if methods and results are approved by Architect.

b. Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.

c. In-Progress Cleaning: Clean cast stone as work progresses.
   1) Remove mortar fins and smears before tooling joints.
   2) Remove excess sealant immediately, including spills, smears, and spatter.

d. Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as follows:
   1) Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
   2) Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of cast stone.
   3) Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
   4) Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
   5) Clean cast stone with proprietary acidic cleaner applied according to manufacturer's written instructions.

END OF SECTION

06 41 40 SOLID SURFACING

A. Scope

Provide labor, materials, and equipment necessary for the complete installation of solid surfacing at window sill locations as indicated. Items to be provided, but not limited to, are as follows:

1. Related Work Specified Elsewhere:

   a. Section 07920 JOINT SEALANTS.
   b. Section 09900 PAINTING.

2. Submittals: Available color and pattern choices for solid surfacing. Only monolithic solid colors are needed for selection.

3. Delivery, Storage and Handling:

   a. Protect millwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.

   b. Field Measurements: Where millwork is indicated to be fitted to other construction, check actual dimensions of other construction by accurate field measurements before manufacturing; show recorded measurements on final shop drawings. Coordinate manufacturing schedule with construction progress to avoid delay of work.

4. Coordination: Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other sections to ensure that interior architectural woodwork can be supported and installed as indicated.

5. Warranty: Provide manufacturer's standard warranty.

B. Products

1. Materials:

   a. Solid Surfacing: Cast, non-porous, filled polymer with through-body colors meeting ANSI Z124.3 or Z124.6.
      1) Wilsonart, DuPont Corian, Meganite, Nevamar or Architect-approved equal.
      2) Thickness: As noted on Drawings (1/2" minimum).
      3) Tensile Strength: 5,500 psi min. per ASTM D638.
      4) Flexible Strength: 10,000 psi min. per ASTM D790.
      5) Hardness: >85 per Rockwell "M" scale.
      6) Color & Finish: Shall be selected by Architect from manufacturer's full range of colors and finishes.

2. Fabrication, General:

   a. Fabricate architectural woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
      1) Edges of solid surface members less than 1" in nominal thickness: 1/16".

b. Where possible, conceal fasteners or anchors used on architectural woodwork. Where exposed, fasteners or anchors shall be tamper resistant.

C. Execution

1. Installation, General:

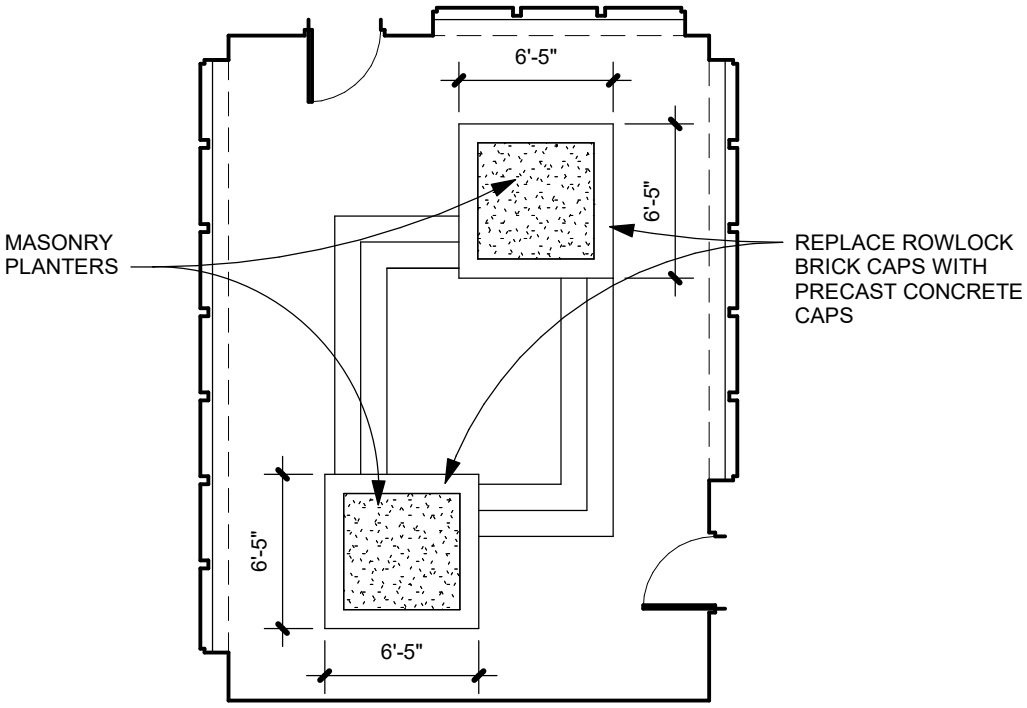
a. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8" in 96" for plumb and level (including tops).

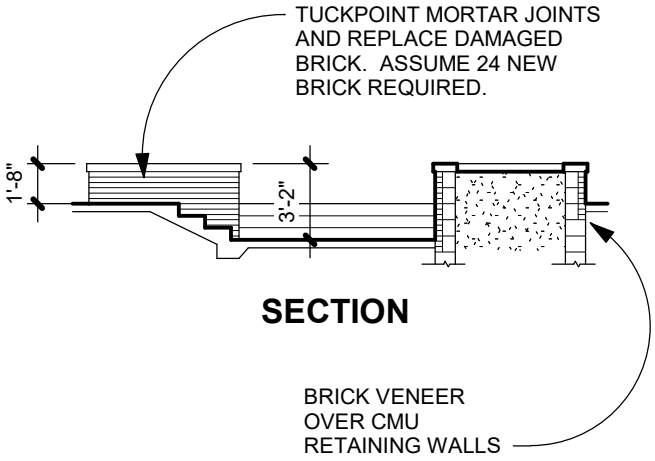
b. Fill nail holes with matching filler where exposed.

2. Machining: Conform to manufacturer's recommendations.

3. Adjustment: Defective workmanship or damaged components shall be corrected; repaired, or replaced; as requested by Architect without further cost to the Owner.

END OF SECTION





SECTION

LOWER COURTYARD PLAN

NORTH

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"	DRAWN BY Author	Addendum 1
ALLIANCE ARCHITECTS 929 Lincolnway East, Suite 200 | South Bend, Indiana 46601	DATE 01/06/22 DRAWING SHT. A1A	PORTAGE TOWNSHIP SCHOOLS 6450 US HIGHWAY 6 PORTAGE, INDIANA, 46368