INVITATION TO BID
from
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
PURCHASING DEPARTMENT, 800 ALLEGHENY AVENUE, PITTSBURGH, PENNSYLVANIA 15233

BID PROPOSAL NO. 1136
BUILDING ENVELOPE RESTORATION
MILTON HALL – ALLEGHENY CAMPUS

Sealed proposals will be received and publicly opened by a Purchasing Agent of the Community College of Allegheny County.
Proposals must be received by the Purchasing Department, 800 Allegheny Avenue, Pittsburgh, Pennsylvania 15233 on or before 2:00 PM, on Friday, February 21, 2025.

Proposals received after this deadline will be considered as a "late bid" and returned unopened to the offerer.

BID SCOPE

Provide all labor, material, equipment, permits and supervision required to restore the Milton Hall building envelope at Allegheny Campus in accordance with specification, drawings, terms and conditions contained herein.

A mandatory pre-bid meeting and site visitation will be held on Tuesday, February 11, 2025, at 9:00 a.m. Meet at the front entrance to Milton Hall (tallest building on the campus), Allegheny Campus, 808 Ridge Ave., Pittsburgh, PA 15212.

Project Labor Agreement compliance is required.

For questions, contact Mike Cvetic (mcvetic@ccac.edu), Director of Purchasing no later than three business days before the bid due date.

BID REQUIREMENTS (where checked)

__X__ Bid Bond. . . . . 10% of total base bid amount (Submit with Bid)

__X__ Performance Bond. . . . . 100% of total contract amount (Awardee Only)

__X__ Payment Bond. . . . . 100% of total contract amount (Awardee Only)

__X__ Master Services Agreement (Awardee Only)

__X__ No Lien Agreement (Awardee Only)

__X__ Insurance Certificate (Awardee Only)

BID BOND: Bid must include the required bid bond or certified check, which will be returned to the unsuccessful bidder approximately 45 days after the bid due date.

PERFORMANCE BOND: The successful bidder will be required to enter into a written contract with the College and to furnish a contractor's bond conditioned for the faithful and full performance of the contract with sufficient surety in the amount stated above. Any surety cosigning the contractor's bond shall be an Incorporated surety company approved by the Court of Common Pleas of Allegheny County. Bond with surety must be furnished within 20 days after receipt of the contract. The Board of Trustees reserves the right to reject any bond furnished where it is in the best interest of the College to do so.
The College requires Power of Attorney attached to bonds to be dated concurrently, sealed, and executed by a proper **live** (not facsimile) **signature**.

PAYMENT BOND: The bidder to whom the contract is awarded shall furnish a bond to guarantee the payment of third-party subcontractors involved in fullment of services rendered against College contracts. Such bonds shall be with sufficient surety and in the amount stated above. Failure on the part of the contractor to furnish such bond shall be just cause for cancellation of award.

NO LIEN AGREEMENT AND/OR INSURANCE CERTIFICATES: As required by the College, the No Lien Agreement and/or Insurance Certificate may be requested of the successful bidder.

THE BOARD OF TRUSTEES RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

INDEX TO SPECIFICATIONS
FOR
BID PROPOSAL NO. 1136
BUILDING ENVELOPE RESTORATION – MILTON HALL – ALLEGHENY CAMPUS

Drawings: RST-0.0, RST-0.1, RST-1.0, RST-2.0, RST 2.1, RST-2.2, RST-2.3, RST-2.4, RST-3.0, RST-3.1, RST-3.2, RST- 3.3, RST-4.0, RST-4.1, RST-4.2

The CCAC Purchasing Department is now publishing all bids via the CCAC website at https://www.ccac.edu/business/rfp-bids.php. It will be each vendor's responsibility to monitor the bid activity within the given website ("Bid and RFP Opportunities") and ensure compliance with all applicable bid documents inclusive of any issued addenda. Failure to incorporate any applicable addenda in the final submittal may result in the rejection of your bid.

NOTE: FAX OR ELECTRONIC RESPONSES TO BID PROPOSALS ARE NOT ACCEPTABLE.

In the event a sealed bid is hand carried, it is the sole responsibility of the bidder to assure the bid is in possession of the CCAC Purchasing Department prior to the time set for opening.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

INSTRUCTIONS TO BIDDERS

1. All prices quoted shall be F.O.B. destination and include all freight and delivery charges to actual point of delivery.

2. **Bids that vary from specifications/addendum(s) may be rejected by the College.** Any and all changes to specifications will be issued by addenda via fax/mail. It is the responsibility of bidders to provide the College with company name, address, telephone, and fax numbers and contact names if applicable.

3. Bidders must be recognized dealers in specified materials and qualified to advise in the application and/or use of the materials. When requested, the bidder must satisfy the Community College of Allegheny County that they have the organization, capital, and stock availability and experience to fulfill their bid offer.

4. Bids may be rejected or award cancelled by the College if a bidder intends to sublet any/all of the required work.

5. Completely executed bid documents must be submitted in a **sealed envelope bearing the offering company's name and address; and, the bid number must appear on the sealed envelope.** No College representative will bear any responsibility for the premature opening of a bid which is not properly addressed and identified.

6. Whenever the words "Purchasing Agent" or a pronoun referring to a College Agent appears in either the specifications and/or Articles of Agreement, the Agent is acting only under the authority of and subject to the approval of the Board of Trustees of the Community College of Allegheny County.

7. The College reserves the right to award all or any items, separately or in a lump sum whichever is in the best interest of the College.

8. Bids for supplies shall be submitted to the College in accordance with the numbered item(s) on the price sheet. Unit prices(s) shall prevail where extension of prices is requested.

9. Contracts will not be awarded by the College to any corporation, firm, or individual that has failed in any former contract with the College to perform work or complete work or, in the College's sole judgment, to satisfactorily deliver or provide the quality of materials, fulfill a guarantee(s) or complete work in accordance with the schedule for such prior contract."

10. If the College Agent is of the opinion that the awarded work/products are unnecessarily delayed, the rate of progress of delivery is unsatisfactory, or that the corporation, firm, or individual contractor is willfully violating any of the contract requirements or conditions or is acting in bad faith, the College's Agent shall take whatever action necessary for the completion of the work and/or delivery of the products to the College. Resulting expenses to the College will be deducted from monies due the contractor and the bondsman will be held liable for any balance due at the completion of the contract.

11. Inspection of materials and workmanship of the contractor by a College Agent will not lessen the responsibility of the contractor from the obligation to perform and deliver satisfactory work/materials to the College. The contractor is expected to pay for the cost of tests for defective materials. This cost may be deducted from any monies due the contractor from the College.

12. The contractor will not receive instructions from a College Agent relative to the work or delivery until a contract has been duly signed and the bond, if required, is approved.

13. Companies may quote price(s) on work/material to any and all bidders and may also directly submit a bid to the College for the work/material.

14. When samples are requested by the College, the bidder must supply them free of charge. Samples will not be returned to the bidder.

15. The bidder is solely at risk when using unauthorized patented material.

16. Quantities requested by the College are for bidding purposes only. The College may purchase more or less than the estimated quantities.

17. The College reserves the right to reject any and all bids, and to waive minor discrepancies in the bids or specifications, when in the best interest of the College. The College may purchase any part, all, or none of the materials specified.

18. The College will reject materials that do not meet specifications, even if the bidder lists trade names, or names of such materials on the bid.

19. All prices quoted must be held firm for the contract period. Bids containing escalation or other clauses for price change may be rejected. Discounts or other uncalled for allowances quoted will not be considered in making the award and the bid may be rejected.

20. Unless otherwise specified, materials, supplies, and/or equipment must be delivered thirty (30) days from the date of the purchase order.

21. Unless otherwise specified, materials, supplies, and/or equipment must be new, current stock, and unused.

SIGNING OF AGREEMENT AND BOND

22. Successful bidders are required to sign Contract Articles of Agreement and bond forms as follows:

    If trading as an Individual: All copies of Contract Articles of Agreement and bond(s) must be signed by the individual to whom the award is made and signature must be witnessed by the same witness.

    If trading as a Partnership: All copies of Contract Articles of Agreement and bond(s) must be signed by **every partner** comprising the Partnership, regardless of number, and these signatures must be witnessed by the same witness.

    If trading as a Corporation: All copies of Contract Articles of Agreement and bond(s) must be signed by the **President (or Vice President)** and attested by the Secretary or Assistant Secretary and Corporate seal must appear on all copies.

    The County requires that Power of Attorney forms be attached to bonds, bear the same date as that appearing on the bonds and that the forms are sealed and executed by a proper **live signature**.

FICTITIOUS NAME REGISTRATION

23. To comply with a provision of the law regarding registration under the Fictitious Name Act of the Commonwealth of Pennsylvania, successful bidders trading as an **Individual or a Partnership** must submit a certified copy of their Fictitious Name Registration with their contract. Fictitious Name Registration forms are issued by the Office of the Prothonotary of Allegheny County, or the county in which the business is located.

PREVENTION OF DELAY

24. A contractor will be considered in **default** if the contractor has work performed or means employed in the carrying out of the contract that would in any way cause or result in a suspension or delay of, or strike upon the work to be performed of any of the trades working in or about the premises described, or in or about any other building of the Community College of Allegheny County.

25. When trade names or catalog numbers are used, bidders may quote on any equal (unless otherwise stated by the College) but such bids must show trade names and/or catalog numbers of the products.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

RETURN BID PROPOSAL FORM

FOR

BID PROPOSAL NO. 1136
BUILDING ENVELOPE RESTORATION – MILTON HALL – ALLEGHENY CAMPUS

Complete this form and submit with your bid.

- **The undersigned agrees to comply with the Instructions to Bidders and Specifications for the price(s) quoted on the Return Price Form. Price(s) quoted include all allowable cash and/or credit discounts.**
- **The College may reject bids quoting unspecified discounts and/or allowances.**

Submitted by:

_____

Company Name Bidding (Please print) | Contact Person at Company (Please print)

_____ _____

Signature | Title

(Handwritten signature must appear here in ink.)

Address_____

_____ _____

Telephone Number (Include Area Code.) | Fax Number (Include Area Code.)

Trading as: (Check one.) **Please print.**

_____ Individual Owner _____

_____ Partnership Partner _____ Partner_____

_____Corporation Exact Name_____

State Incorporated_____

THE BOARD OF TRUSTEES OF THE COLLEGE RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS.

Rev: 1/01

BID PROPOSAL

NO. 1136

Project: Community College of Allegheny County – Milton Hall Restoration Program

Bid Due: _____

Bid To: CCAC Purchasing Department

Name of Bidder: _____

1.01 GENERAL

A. Undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner to complete all Work as specified or indicated in Procurement Documents.

B. Bidder accepts all of terms and conditions of Bidding Documents including without limitation those dealing with disposition of Bid Security. This Bid will remain open for 60 days after day of Bid opening.

C. In submitting this Bid, Bidder represents, as more fully set forth in Bidding Documents that:

1. Bidder has examined a complete set of Procurement Documents including any Addenda herein, receipt of which shall be acknowledged.

Date	Addendum Number
- -	
- -	
- -	

2. Bidder has examined site and locality where Work is to be performed, legal requirements (federal, state and local laws, ordinances, rules and regulations) and conditions affecting cost, progress or performance of Work, and has made such independent investigations as Bidder deems necessary.

3. This Bid is genuine and not made in interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any other agreement or rules of any group, association, organization or corporation; Bidder has not directly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.
4. Bidder agrees that prices set forth are correct and that no mistake or error has occurred in Bidder's computations.
5. Bidder understands that quantities listed in Bid Form are estimates based on limited investigation. Changes in quantities based on actual site conditions will be addressed by Change Order to determine final contract amount.
6. Bidder understands that Owner will not be liable for any amount in excess of Bid Amount, except as expressly stated in written Change Orders duly executed and delivered by Owner.

D. Bidder declares that in preparing this Bid, all labor, materials and products are available to meet completion date.

E. Bidder agrees that Owner reserves right to accept or reject this Bid, or any portion thereof.

1.02 BID DOCUMENTS

A. Identify all products, subcontractors and other persons and organizations proposed for those portions of Work listed below:

Description of Work	Products / Manufacturer / Installer
1. Demolition	
2. Concrete Restoration	
3. Masonry Restoration	
4. Restoration Cleaning	
5. Fluid Applied Air Barrier	
6. Metal Flashing and Trim	
7. Sealants/Glazing	
8. Water Repellent	
9. Elastomeric Coating	

B. BASE BID:

1. Lump Sum Amount for Base Bid shall be based on following breakdown. Provide Unit Cost and Extended Cost for each line item where indicated.

BASE BID – PHASE 1					
	Description	Units	Quantity	Unit Cost	Cost
1.0	**GENERAL REQUIREMENTS**				
1.1	General Conditions	LS	1		$
1.2	Vertical Access / Protection	LS	1		$
1.3	Consultant Inspection Time	HRS		$	$
1.4	Bonds	LS	1		$
1.5	Permits	LS	1		$
2.0	**SITE**	NOT APPLICABLE			
3.0	**CONCRETE**				
3.1	Concrete Repair – Horizontal Partial Depth (2”-4”) per Note R14	SF	100	$	$
3.2	Concrete Repair – Horizontal Full Depth (4”-8”) per Note R14	SF	100	$	$
3.3	Concrete Repair – Vertical/Overhead Partial Depth (2”-4”) per Note R1	SF	1,100	$	$
3.4	Concrete Crack Injection (Epoxy) per Note R14	LF	60	$	$
3.5	Concrete Crack Injection (Grout) per Note R1	LF	1,100	$	$
4.0	**MASONRY**				
4.1	Brick Masonry Repointing per Notes R2, R3 and R4	SF	5,500	$	$
4.2	Brick Unit Replacement per Notes R2, R3, and R4	EA	550		
4.3	Brick Masonry Reconstruction Limited Area (<10sf) per Notes R2, R3 and R4	SF	1,100	$	$
4.4	Brick Masonry Reconstruction Large Area (>10sf) per Notes R2, R3, R4, R5, R6, and R7	SF	4,000	$	$
4.5	Restoration Cleaning of all Masonry and Concrete Wall Surfaces per Notes R1, R2, R3 and R4	SF	32,000	$	$
5.0	**METALS**	NOT APPLICABLE			
6.0	**WOODS / PLASTICS / COMP**	NOT APPLICABLE			

7.0	**THERMAL / MOISTURE PROTECTION**				
7.1	Joint Sealant Replacement – All Construction, Expansion and Control Joints per Note R8	LF	3,200	$	$
7.2	Joint Sealant Replacement – All Opening Perimeter Joints per Note R9	LF	5,600	$	$
7.3	Provide New Sealant at all Glazing Joints (“Wet-Seal”) per Note R10	LF	5,600	$	$
7.4	Provide New Sealant at all Butt-Glazed Joints (Curtain Wall) per Note R11	LF	650	$	$
7.5	Fluid Applied Membrane Air Barrier per Notes R4, R5, and R6	SF	2,400	$	$
7.6	Through-Wall Flashing System per Notes R4, R5, and R6	LF	3,500	$	$
7.7	Water Repellent – Brick Masonry per Notes R2, R4, R5, and R6	SF	7,200	$	$
8.0	**DOORS AND WINDOWS**	NOT APPLICABLE			
9.0	**FINISHES**				
9.1	Elastomeric Coating – Concrete per Note R1	SF	13,000	$	$
9.2	Traffic Coating – Concrete per Note R15	SF	500	$	$
9.3	Elastomeric Coating – Stucco per Note R12	SF	1200	$	$
9.4	Coating – Transite Panels per Note R13	SF	360	$	$
BASE BID - PHASE 1 TOTAL				$	

B. Requirements for Alternate Bids:

1. The Bidder is required to provide a bid price for each Alternate Work Item that includes any additional cost that may be incurred, or adjustment that may be required, if Alternate Work Items are added to the scope of the project. No subsequent “extras” will be considered for coordination or incidentals required to complete Alternate Bid Work Items

2. Award of this contract will be based upon the Base Bid or Base Bid and Alternates as selected by the Owner.

3. Owner may select any or none of the Alternates based upon the priority of the repair and/or the project budget.

ALTERNATE BIDS – PHASE 1					
	Description	Units	Quantity	Unit Cost	Cost
#1	DEDUCT all Work designated on elevation drawings 1/RST-2.2, 2/RST-2.2, and 4/RST-2.3.	LS	1		$
#2	DEDUCT all Work designated on elevation drawings 3/RST-2.0.	LS	1		$
#3	DEDUCT all Work designated by Notes R14 and R15 on elevation drawings 1/RST-2.0.	LS	1		$

ALTERNATE BID #4 – PHASE 2					
	Description	Units	Quantity	Unit Cost	Cost
1.0	**GENERAL REQUIREMENTS**				
1.1	General Conditions	LS	1		$
1.2	Vertical Access / Protection	LS	1		$
1.3	Consultant Inspection Time	HRS		$	$
1.4	Bonds	LS	1		$
1.5	Permits	LS	1		$
2.0	**SITE**	NOT APPLICABLE			
3.0	**CONCRETE**				
3.1	Concrete Repair – Vertical/Overhead Partial Depth (2”-4”) per Note R1	SF	1,200	$	$
3.2	Concrete Crack Injection (Grout) per Note R1	LF	1,200	$	$
4.0	**MASONRY**				
4.1	Brick Masonry Repointing per Notes R2 and R3	SF	4,000	$	$
4.2	Brick Unit Replacement per Notes R2 and R3	EA	450		
4.3	Brick Masonry Reconstruction Limited Area (<10sf) per Notes R2 and R3	SF	1,200	$	$
4.4	Brick Masonry Reconstruction Large Area (>10sf) per Notes R2, R3, and R7	SF	600	$	$
4.5	Restoration Cleaning of all Masonry and Concrete Wall Surfaces per Notes R1, R2, R3 and R4.	SF	35,000	$	$
5.0	**METALS**	NOT APPLICABLE			
6.0	**WOODS / PLASTICS / COMP**	NOT APPLICABLE			
7.0	**THERMAL / MOISTURE PROTECTION**				
7.1	Joint Sealant Replacement – All Construction, Expansion and Control Joints per Note R8	LF	4,000	$	$
7.2	Joint Sealant Replacement – All Opening Perimeter Joints per Note R9	LF	7,000	$	$
7.3	Provide New Sealant at all Glazing Joints (“Wet-Seal”) per Note R10	LF	7,000	$	$
7.4	Water Repellent – Brick Masonry per Note R2	SF	500	$	$
8.0	**DOORS AND WINDOWS**	NOT APPLICABLE			
9.0	**FINISHES**				
9.1	Elastomeric Coating – Concrete per Note R1	SF	15,000	$	$

9.2	Elastomeric Coating – Stucco per Note R12	SF	100	$	$
9.3	Coating – Transite Panels per Note R13	SF	24	$	$
ALTERNATE BID #4 - PHASE 2 TOTAL				$	

C. Bonds

1. Cost for performance and payment bonds shall be provided as a separate line item in table(s) above.

D. Scheduling:

Bidder agrees to have all labor, materials, equipment, etc., available to start and complete Project as follows:

1. Projected starting date:_____ (date)
2. Total working days to complete Phase 1 Scope of Work:_____ (days)
3. Dates for Substantial and Final Completion of Phase 1 Scope of Work:
   a. Substantial: _____ (date)
   b. Final: _____ (date)
4. Total working days to complete Phase 2 Scope of Work:_____ (days)

E. Unit Pricing

1. Unit prices identified above in the bid tables will be used to determine cost to be added to or deducted from Contract Sum for minor changes to work, as defined by Owner. Unit prices shall include labor, material, overhead, profit and applicable taxes.

2. Quote additional unit prices for following tasks:
   a. Restoration anchors per Section 04900 $_____ /anchor
   b. In the event specified work is phased up to 4 years, provide a general percent increase of prices. _____%/yr

F. All additional hourly work directed by Owner shall be done during duration of contract at hourly rates indicated below:

HOURLY RATE BASIS – LABOR (INCLUDING OVERHEAD AND PROFIT)

TITLES	STRAIGHT TIME	OVERTIME
Laborer	$_____/Hr.	$_____/Hr.
Supervisor	$_____/Hr.	$_____/Hr.
Foreman	$_____/Hr.	$_____/Hr.
Journeyman	$_____/Hr.	$_____/Hr.

G. Required Bid Attachments:

1. Bid Bond (10% of Total Contract Value) **OR**
2. Certified Check (10% of Total Contract Value)
3. Copy of Contractors Guarantee (Sample)
4. Copy of Major Material Suppliers Warranty (Sample)
5. Retrun Forms 1.0 through 6.0

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

NON-COLLUSION AFFIDAVIT

Contract/Bid No. **1136**

State of _____ : :s.s.

County of _____ :

I state that I am _____of_____

(title) (name of my firm)

and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication or agreement with any bidder or potential bidder.

(2) Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

(5) _____, its affiliates,

(name of my firm)

subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

I state that_____ understands and

(name of my firm)

acknowledges that the above representations are material and important, and will be relied on by the Community College of Allegheny County in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the Community College of Allegheny County of the true facts relating to the submission of bids for this contract.

Signature_____ Title_____

(MUST BE SIGNED HERE IN HANDWRITING, IN INK.)

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

Notary Public_____ My Commission Expires: _____

RETURN FORM 3.0

INSTRUCTIONS FOR NON-COLLUSION AFFIDAVIT

1. This Non-collusion Affidavit is material to any contract awarded pursuant to this bid. According to the Pennsylvania Antibid-Rigging Act, 73 P.S. § 1611 et seq., governmental agencies may require Non-collusion Affidavits to be submitted together with bids.

2. This Non-collusion Affidavit must be executed by the member, officer or employee of the bidder who makes the final decision on prices and the amount quoted in the bid.

3. Bid rigging and other efforts to restrain competition and the making of false sworn statements in connection with the submission of bids are unlawful and may be subject to criminal prosecution. The person who signs the Affidavit should examine it carefully before signing and assure himself or herself that each statement is true and accurate, making diligent inquiry, as necessary, of all other persons employed by or associated with the bidder with responsibilities for the preparation, approval or submission of the bid.

4. In the case of a bid submitted by a joint venture, each party to the venture must be identified in the bid documents, and an Affidavit must be submitted separately on behalf of each party.

5. The term "complementary bid" as used in the Affidavit has the meaning commonly associated with that term in the bidding process, and includes the knowing submission of bids higher than the bid of another firm, any intentionally high or noncompetitive bid, and any other form of bid submitted for the purpose of giving a false appearance of competition.

6. Failure to file an Affidavit in compliance with these instructions will result in disqualification of the bid.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

MBE/WBE PARTICIPATION: CCAC encourages the participation of minority and women-owned businesses in all of its contracts and is committed to providing maximum opportunities for qualified minority and/or women-owned business enterprises ("MBE/WBEs") to participate in its work. Bidder agrees (1) if qualified, to take reasonable and timely steps to obtain appropriate certification as an MBE and/or WBE, (2) to ensure that MBE and/or WBEs are appropriately considered as subcontractors and/or suppliers under this Agreement; and (3) to report moneys spent for MBE and/or WBE subcontractors and/or suppliers for work as CCAC may from time to time reasonably request. **CCAC's goal for MBE/WBE participation is 20% (13% MBE and 7% WBE/DBE).** Please provide documentation as to your firm's good faith effort to reach this goal by describing all applicable details of MBE/WBE participation that may be included in the resulting agreement.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

MINORITY PARTICIPATION GOALS – BID PROPOSAL NO. 1136

The following must be included with your bid.

Reference: General Conditions for Construction and Renovation Contracts - Item 6, Page 2 – Minority & Disadvantaged Participation Goals

A 20**%** M/W/DBE work participation is established (13% MBE and 7% WBE/DBE). Document your firm's good faith effort to obtain the 20**%** Goal:

M/W/DBE Company	Contact Person	Phone Number	$Amount or Objective %

_____ I am an M/W/DBE. (ATTACH CERTIFICATION)

Total: _____

Bidder acknowledges that CCAC may communicate with listed firms to verify the extent of the contact.

Bidding Company's Name:_____

Signature:_____ Title:_____

Date:_____

Revised: 9/14/21

RETURN FORM 4.0

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

BID PROPOSAL NO. 1136

COMMONWEALTH OF PENNSYLVANIA
BID AWARD & RETENTION LAW
ACT NO. 1978-317, SENATE BILL 68, NOVEMBER 26, 1978

EXTENSION OF CONTRACT EXECUTION REQUIREMENTS

In the event the contract(s)/purchase order(s) resulting from the above specified bid proposal is/are in excess of $50,000.00, the above specified Act will apply.

This Act requires the awarding of a contract to the lowest responsible bidder within sixty (60) days of the date of bid opening and the execution of a contract within thirty (30) days after award by the College Board of Trustees. Thirty (30) day extensions of the date for award and for execution are permitted by the mutual written consent of the College and the successful bidder.

Due to the extent of the approval actions required prior to award and execution of any contract, it may not be possible for the College to complete contract award and execution within the sixty (60) day and thirty (30) day periods. Accordingly, each bidder is requested to indicate their agreement with a thirty (30) day extension of the sixty (60) day award date and thirty (30) day execution date by signing this form and returning it with their bid.

_____
Name of Company

_____
Authorized Company Representative

_____ _____
Signature Title

MUST BE SIGNED HERE IN HANDWRITING, IN INK

RETURN FORM 5.0

LETTER OF ASSENT

BID PROPOSAL NO. 1136

This is to certify that the undersigned Contractor, _____,
has examined a copy of the Project Labor Agreement between the Community College of Allegheny County and the Pittsburgh Regional Building & Construction Trades Council, AFL-CIO dated February 15, 2011 and hereby agrees to comply with all terms and execution of this Agreement. It is understood that the execution of this Letter of Assent shall be as binding on the Contractor as though the Contractor had signed the aforementioned Agreement.

This Letter of Assent will remain in effect through completion of Contractor's work on the above-captioned project at the Community College of Allegheny County's Allegheny Campus location.

The undersigned Contractor further agrees that upon notification by the College, the Contractor will furnish documented proof to the College that the employer complies with the terms and conditions of the Agreement.

This Letter of Assent shall become effective and binding upon the Contractor this _____ day of _____, 20____ and shall remain in effect as set forth above.

_____ _____

Name (Please print) Signature

(MUST BE SIGNED HERE IN HANDWRITING, IN BLUE INK.)

_____

Title

_____

Name of Contractor

RETURN FORM 6.0

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

GENERAL CONDITIONS

FOR

CONSTRUCTION AND RENOVATION CONTRACTS

1. PERMITS

It is the responsibility of the contractor to obtain all permits and/or licenses required by Federal, State, County, City, or other local Municipalities or Authorities for work done or services performed under this contract.

2. ROLE OF CONTRACTOR

In the performance of the work hereunder, the contractor shall act as an independent contractor, and all of his agents, employees, and subcontractors shall be subject solely to the control, supervision, and authority of the contractor.

3. EMPLOYEES OF THE CONTRACTOR

It is understood that the contractor in signing the contract will employ only competent and first-class workmen and mechanics; that no workmen shall be regarded as competent and first-class except those who are duly skilled in their respective branches of labor.

4. BONDS

The College will accept only bonds written by surety companies authorized to do business in the Commonwealth of Pennsylvania and the County of Allegheny and included on the United States Treasury Department Annual List of Surety Companies published July first of each year. Limits for those companies appearing on the United States Treasury Department's list cannot be exceeded. This list is available for inspection in the Purchasing Department, Community College of Allegheny County, Administration Building, 800 Allegheny Avenue, Pittsburgh, Pennsylvania 15233. It is also available from the Surety Bond Branch, Financial Management Services, Department of the Treasury, Washington, D.C. 20226. Phone: 1.202.634.2214.

5. EQUAL OPPORTUNITY

Contractor and all subcontractors shall not discriminate against any employee or applicant for employment because of race, color, creed, national origin, or sex. Contractor and all subcontractors shall also comply with all applicable Federal, State, and local Fair Employment Practice Acts, or similar Acts, Rules, and Regulations and whether or not applicable will comply with the Federal Civil Rights Act of 1964. The Terms and Provisions of Executive Order 11246 and any Executive Order modifying or superseding same, are incorporated herein with respect to any work subject thereto.

The contractor and all subcontractors shall, in all solicitations or advertisements for employees placed by them or their behalf state all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

6. MINORITY & DISADVANTAGED PARTICIPATION GOALS

The College's goal is to obtain 20**%** MBE/WBE/DBE (13% Minority-owned Business enterprise/7% Woman-owned Business Enterprise/Disadvantaged Business Enterprise) participation in the work. This is to be based on the dollar value of employment, subcontracts, supplies, goods, and services as a percentage of the total contract amount. The bidder/contractor must demonstrate to the College prior to award of the contract, and periodically thereafter throughout the term of the contract, their compliance and continued ability to comply with these goals.

The contractor shall submit with their bid (on Return Form 4.0) a completed Minority & Disadvantaged Contractor Commitment Plan that will contain the details of how they plan to comply with this goal should they be awarded the contract.

If the plan is not submitted in the bid or is not acceptable, the College may deem the bid non-responsive and may award the work to the next lowest responsive bidder with an acceptable plan. Thus, it behooves all bidders to formulate their M/W/DBE plan before submitting a bid.

Finding Certified M/W/DBE's - All subcontractors and suppliers of goods and services used to comply with this goal must be **certified** minority or disadvantaged firms. They may be certified by any recognized and reputable organization such as the following: African American Chamber of Commerce, Allegheny County, Port Authority of Allegheny County, City of Pittsburgh, Pittsburgh Regional Minority Purchasing Council, Commonwealth of Pennsylvania, United States Federal Government.

If the firm is not certified and desires to be certified, it is suggested that they contact one of the following organizations. These organizations may also be used as references for sourcing M/W/DBE firms.

Allegheny County
M/W/DBE Department
County Office Building Rm 204
542 Forbes Avenue
Pittsburgh, Pennsylvania 15219
412.350.4309

EMSDC
Regional Enterprise Tower
425 Sixth Avenue
Suite 401
Pittsburgh, Pennsylvania 15219
412.391.4423

Diversity Business Resource Center
700 River Avenue Suite 231
Pittsburgh, PA 15212
412.322.3272

African American Chamber of Commerce
Koppers Building
436 Seventh Avenue, Suite 2220
Pittsburgh, PA 15219
412.391.0610

A list of PA certified M/W/DBE firms can be found on the Internet at **http://www.paucp.com**.

The College expects all firms to demonstrate a good faith effort to include M/W/DBE's when bidding on College contracts. A good faith effort as defined by the Code of Federal Regulations (49CFR26) means "*efforts to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement".*

If you are not successful in securing M/W/DBE participation after a good faith effort is made, provide the following in your waiver request:

- A detailed account of your efforts;
- Your normal business practice and/or inventory profile; and
- An active diversity plan/policy

Reporting During and After Project Completion - The contractor shall submit with their monthly application for payment a written M/W/DBE Contractor Report demonstrating their compliance with the goal. The report shall state the dollar amount spent on labor, materials, services, and subcontracts and shall list firm names and vendor names. At the completion of the project, with final application for payment, the contractor shall submit a recap of their compliance which shall state the dollar amount spent on labor, materials, subcontracts, and services as a percentage of the total contract amount. Projects with shorter timeframes shall require a one-time only report at the completion of the project. Reports are to be accompanied by back-up documentation evidencing the business relationship with the M/W/DBE for the particular project (e.g.: copies of invoices, purchase orders, or evidence of payments).

Failure to Comply With M/W/DBE Goals – If the contractor fails to make a good faith effort (as determined by the College) to comply with the College's 20% M/W/DBE goal or fails to meet their M/W/DBE commitment or to submit documentation as required by the College, the College may consider such non-compliance or breach of contract and any one or more of the following may occur:

- Rejection of the bid
- Forfeiture of bid guaranty
- Termination of the contract
- The imposing of sanctions as deemed appropriate by the College
- Contractor being barred from bidding on College contracts for up to three (3) years
- Or such other remedy as the College deems appropriate

7. FINANCIAL INTEREST

All bidders for construction must be established firms competent to perform the required scope of work. All bidders must satisfy the Community College of Allegheny County that they have the requisite organization, capital, plant, stock, ability, and experience to satisfactorily execute and contract in accordance with the provisions of the contract in which they are interested.
If the contractor's base bid is $25,000.00 or more, the American Institute of Architects form, "Contractors Qualification Statement" form A305 - 1986 (or latest revision) may be requested by CCAC. This form is available from the American Institute of Architects, 1735 New York Avenue N.W., Washington, D.C. 20006. If requested by CCAC, a completed form A305 is to be submitted within 48 business hours and may be faxed to 412.237.3195.

8. EMPLOYMENT OF INDEPENDENT SUBCONTRACTORS

If you are a contractor to the College and the value of the base contract is $25,000.00 or more, you must secure approval of all proposed subcontractors from the College prior to beginning work. Information on your proposed subcontractors is to be submitted on the form entitled Proposed Subcontractors.

Each proposed subcontractor to be employed must be an independent contractor "in fact" and must meet the following criteria:

a. The subcontractor must have a Federal identification number.

b. The subcontractor must perform these same services for others.

c. The subcontractor must have an established place of business.

d. The subcontractor must use their own tools and equipment.

e. The subcontractor must pay all taxes and other items required by law to be paid by an employer with respect to compensation paid to their employees.

f. The subcontractor must provide and maintain all insurance required by law and the College.

If the proposed subcontractor does not meet all of these criteria, they will not be approved.

9. VERBAL AUTHORIZATIONS

No verbal agreement or understanding with any officer, agent, or employee of the College either before or after the execution of the contract shall alter, amend, modify, or rescind any of the terms or provisions contained in any of the contract documents. This provision shall not limit or affect the right to make changes or variations in the work. Any changes must be authorized in writing.

10. APPLICABLE LAW, ACTS, AND ORDINANCES

The contractor(s) shall agree to abide by and be bound by all applicable provisions and regulations of all laws, acts, and ordinances relating to and regulating the hours and conditions of employment.

11. PENNSYLVANIA PREVAILING WAGE ACT

The Pennsylvania Prevailing Wage Act shall be incorporated into and made part of all College construction related contract(s) having an estimated value of $25,000.00 or more.

It is the responsibility of the contractor to ensure that they have included the appropriate Pennsylvania prevailing wage rates in their proposal to the College. Failure to do this will not be a reason for the contractor to withdraw their bid or fail to perform the contract or to request additional payments from the College.

In accordance with the Prevailing Wage Determination Act, the contractor(s) shall:

a. Pay no less than the wage rates including contributions for employee benefits as determined in the decision of the Secretary of Labor and Industry and shall comply with the conditions of the Pennsylvania Prevailing Wage Act approved August 15, 1961 (Act No. 442) as amended August 9, 1963 and/or subsequent amendments thereof (Act No. 342) and the regulations issued pursuant thereto.

b. Apply all applicable provisions of the Acts and Laws to all work performed on the contract by the contractor(s) and subcontractor(s).

c. Insert in each of his subcontracts all of the stipulations contained in these required provisions and such other stipulations as may be required.

d. Assure that no workmen be employed on the public work except in accordance with the classifications set forth in the decisions of the Secretary. In the event that additional or different classifications are necessary, the procedure set forth in Section 7 of the above referenced Regulations shall be followed.

e. Assure that all workmen employed or working on this contract shall be paid unconditionally regardless of whether any contractual relationship exists or the nature of any contractual relationship which may be alleged to exist between any contractor, subcontractor, and workmen not less than once a week without deduction or debate on any account either directly or indirectly except authorized deductions, the full amounts due at the time of payment computed at the rates applicable to the time worked on the appropriate classification. Nothing in this contract, the Act or these Regulations, prohibits the payment of more than the general prevailing minimum wage rates as determined by the Secretary to any workmen on public work.

f. Each subcontractor shall post for the entire period of construction the wage determination decisions of the Secretary including the effective date of any charges thereof in a prominent and easily accessible place or places at the site of the work and at such place or places used by them to pay workmen their wages. The posted notice of wage rates must contain the following information:

   1. Name of project.

   2. Name of public body for which it is being constructed.

   3. The crafts and classifications of workmen listed in the Secretary's general prevailing minimum wage rate determination for the particular project.

4. The general prevailing minimum wage rates determined for each craft and classification and the effective date of any changes.

5. A statement advising workmen that if they have been paid less than the general prevailing minimum wage rate for their job classification or that the contractor and/or subcontractor are not complying with the Act or these Regulations in any manner whatsoever they may file a protest with the Secretary of Labor and Industry. Any Workmen paid less than the rate specified in the contract shall have a civil right of action for the difference between the wage paid and the wages stipulated in the contract, which right of action must be exercised within six months from the occurrence of the event creating such right.

g. All subcontractors shall keep an accurate record showing the name, craft, and/or classification, number of hours worked per day, and the actual hourly rate of wage paid (including employee benefits) to each workman employed by him in connection with the public work and such record must include any deductions from each workman. The record shall be preserved for two years from the date of payment and shall be open at all reasonable hours to the inspection of the public body awarding the contract and to the Secretary or his duly authorized representative.

h. Assure that apprentices shall be limited to such numbers as shall be in accordance with a bonafide apprenticeship program registered with and approved by the Pennsylvania Apprenticeship and Training Council and only apprentices whose training and employment are in full compliance with the provisions of the Apprenticeship and Training Act approved July 14, 1961 (Act No. 304) and the Rules and Regulations issued pursuant thereto shall be employed on the public work project. Any workman using the tools of a craft who does not qualify as an apprentice within the provisions of this subsection shall be paid at the rate predetermined for journeymen in that particular craft and/or classification.

i. Pay wages without any deductions except authorized deductions. Employers not parties to a contract requiring contributions for employee benefits which the Secretary has determined to be included in the general prevailing minimum wage rate shall pay the monetary equivalent thereof directly to the workmen.

j. Be advised that payment of compensation to workmen for work performed on public work on a lump sum basis, or a piece work system, or a price certain for the completion of a certain amount of work, or the production of a certain result shall be deemed a violation of the Act and these Regulations regardless of the average hourly earnings resulting therefrom.

k. Each subcontractor shall file a statement each week and a final statement at the conclusion of the work on the contract with the contracting agency under oath and in form satisfactory to the Secretary certifying that all workmen have been paid wages in strict conformity with the provisions of the contract as prescribed by Section 3 of these Regulations; or, if any wages remain unpaid, to set forth the amount of wages due and owing to each workman respectively. The College shall require the contractor and all subcontractors to file weekly wage certifications utilizing form WH-347. (Reference: Section 10(a) of Act and Section 10 of Regulations). Prior to making final payment the College will require final wage certifications from all contractors and subcontractors.

12. PAYMENT TO CONTRACTORS

The College maintains the right to withhold a percentage of monies requested by contractors for work done under this contract in accordance with the American Institute of Architects Application for Payment form G-702 as indicated in Section 01152--Applications for Payment of the technical specifications.

13. INSURANCE REQUIREMENT

A properly executed certificate of insurance must be submitted with the signed Contract Articles of Agreement. The certificate of insurance must show that the contractor and subcontractors comply with the College's insurance requirements. The certificate of insurance must state that in the event any coverage shown is to be cancelled the College will be given a thirty day advance notice of the cancellation.

14. MINORITY BIDDERS

The Community College of Allegheny County hereby notifies all bidders that it will affirmatively ensure that minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

15. MODIFICATION AND WITHDRAWAL OF BIDS

a. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

b. Bidders may withdraw their bid within two (2) business days of the bid opening only within accordance of Commonwealth of Pennsylvania public bidding law.

16. TAXES

CCAC is a governmental entity and is generally exempt from sales and use tax with respect to purchases of building machinery and equipment. A tax exemption certificate will be provided upon request. It is the bidder's responsibility to pay any/all applicable taxes on non-exempt equipment, supplies and services in accordance with applicable law.

17. PENNSYLVANIA STEEL PRODUCTS PROCUREMENT ACT

Contractor acknowledges that CCAC is a public agency subject to the requirements of the Pennsylvania Steel Products Procurement Act, 73 P.S. Section 1881 et. seq (the "SPPA"). Contractor therefore represents and warrants that any and all steel products purchased, used or supplied by it in the performance of the Contract will be melted and manufactured in the United States, and that its performance hereunder will otherwise comply with requirements of the SPPA at all times. Contractor further agrees to provide CCAC with documentation and/or certification of its compliance with the foregoing requirements, as required under the SPPA, and acknowledges that it shall not be entitled to receive payment hereunder until such documentation and/or certification has been provided.

18. MARKUPS ON CHANGE ORDERS

Markups on change order requests shall not exceed 15%. This would apply to overhead and profit, labor, materials, equipment, etc.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY
800 ALLEGHENY AVENUE, PITTSBURGH PA 15233

_____
Bond Number

P E R F O R M A N C E B O N D

Know all men by these Presents that we _____**"TO BE COMPLETED ONLY BY AWARDEE"**____ (hereinafter called "Principal") as Principal, and _____ authorized to do business in the Commonwealth of Pennsylvania (hereinafter called "Surety") as Surety, are held and firmly bound unto the Community College of Allegheny County, through its Board of Trustees, _____ in the sum of _____

_____

to be paid to the said College aforesaid, its certain attorney, or assigns. To which payment will and truly be made, said principal and said surety to bind themselves their respective successors or assigns jointly and severally, firmly by these presents.

WITNESS our hands and seals, the _____ day of _____ 20____.

WHEREAS the above bounded _____

_____ has filed with the Community College of Allegheny County, proposals for the _____

The Condition of the above Obligation is such that if the said _____ shall perform _____

_____

In accordance with the agreement between _____ and the Community College of Allegheny County of even date herewith and the specifications and proposals attached to and made part of the agreement, and shall indemnify and save harmless the said Community College of Allegheny County from all liens, charges, demands, loss and damages of every kind and nature, whatsoever. Then this obligation to be void, otherwise to be and remain in full force and virtue.

Attest:

_____ (SEAL)
CONTRACTOR

_____ _____ (SEAL)
SECRETARY PRESIDENT

Signed, Sealed and delivered in presence of

_____ (SEAL)
SURETY COMPANY

_____ _____ (SEAL)
ADDRESS

_____ (SEAL)
TITLE

COMMUNITY COLLEGE OF ALLEGHENY COUNTY
800 ALLEGHENY AVENUE, PITTSBURGH PA 15233

LABOR AND MATERIAL

P A Y M E N T B O N D

KNOW ALL MEN BY THESE PRESENTS:

That we_____ **"TO BE COMPLETED ONLY BY AWARDEE"** _____

_____ as Principal

hereinafter called Principal, and _____

_____ as Surety, hereinafter called Surety, are held and firmly bound unto the

COMMUNITY COLLEGE OF ALLEGHENY COUNTY, through its Board of Trustees as Obligee, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of _____

_____ Dollars ($_____),

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement, dated _____ 20_____, entered into a contract with Owner for _____

in accordance with drawings and specifications prepared by_____

(Here insert full name, title and address)

_____which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

(1) A claimant is defined as one having a direct contract with the Principal or with a sub-contractor of the Principal for labor, material, or both used or reasonably required for use in the performance of the contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

(2) The above-named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

(3) No suit or action shall be commenced hereunder by any claimant.

  (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the Owner, or the Surety above-named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

  (b) After the expiration of one (1) year following the date on which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

  (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

(4) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this _____ day of _____ 20_____

_____ By_____
Witness (Seal) Principal

_____ By_____
Witness (Seal) Surety

This bond is issued simultaneously with performance bond in favor of the Owner conditioned on the full and faithful performance of the Contract.

Original – January 1980

MASTER SERVICES AGREEMENT

"Awardee Only"

Bid 1136

THIS MASTER SERVICES AGREEMENT ("Agreement") is made and entered into as of this ____ day of ----------, 2018, by and between **Community College of Allegheny County**, with a business office located at 800 Allegheny Avenue, Pittsburgh, PA 15233 (hereinafter referred to as the "College"), and ---------- (hereinafter referred to as "Contractor").

RECITALS

WHEREAS, the College has issued a Request for Quotation, Bid Solicitation, Request for Proposal, and/or a Purchase Order (hereinafter individually and collectively referred to as the "Order"), pursuant to

Bid Proposal No.	**Awardee Only**

which College seeks to procure certain work and services, as more fully described on the Order; and

WHEREAS, Contractor has submitted a proposal to the College to provide the services described in the Order, a copy of which is attached hereto as Exhibit A (hereinafter the "Proposal") and incorporated by reference;

WHEREAS, the College desires to engage Contractor to provide the services, pursuant to and in accordance with the terms and conditions that this Agreement set forth herein.

NOW, THEREFORE, in consideration of the premises and covenants that this Agreement contains, the receipt and adequacy of which are hereby acknowledged, the parties, intending to be legally bound, agree as follows:

1. Term. The term of this Agreement shall be as specified in the Order unless otherwise stated in the section below. If no date is specified, this Agreement shall begin with the date first stated above and terminate upon satisfactory completion of the services described herein.

AWARDEE ONLY

2. Services. Contractor shall fully and faithfully perform the work and services described in the Order and the Proposal and any specifications, scope of work or other documentation attached thereto. Contractor warrants that all work and services performed by or on behalf of it under this Agreement will conform to all terms and specifications set forth in the Order and in the Proposal.

3. Price/Fees: The College shall pay Contractor for the services and work performed by Contractor in accordance with the fees and/or prices set forth in the Proposal.

4. Terms and Conditions: This Agreement, and the services to be performed by Contractor hereunder, will be subject to and governed by College's Standard Terms and Conditions for the Purchase of Goods and Services ("Master Terms"), which are incorporated herein by reference. The Master Terms can be viewed and downloaded at https://online.flippingbook.com/view/182546862. By signing below, Contractor acknowledges its receipt and acceptance of the Master Terms.

5. Insurance Requirements: In addition to the Master Terms, Contractor shall comply with the insurance and indemnification requirements set forth on Exhibit B, which are incorporated herein by reference. Prior to commencing performance of the Services, Contractor shall furnish to the College a properly executed certificate(s) of insurance which evidence all insurance required by Exhibit B. Said certificate(s) of insurance shall be attached herein as Exhibit C.

6. Assignment. Contractor may not assign or subcontract this Agreement or its performance thereof, in whole or in part, without the College's prior written consent.

7. Entire Agreement; Modification. This Agreement, together with the Exhibits and other documents referenced and incorporated herein, sets forth the entire agreement of the parties on the subject matter hereof and supersedes all previous or concurrent agreements between them, whether oral or written. Any proposal, quotation, acknowledgment, confirmation or other writing submitted by Contractor to the College shall not be deemed to amend or modify this Agreement, and will be of no legal effect except to the extent that it serves to identify the work and services to be performed by the Contractor. This Agreement, and the terms set forth in the Master Terms, will control over any conflicting terms or provisions contained in any proposal, invoice or other documentation submitted by Contractor to College. The terms of this Agreement may not be modified or changed except by a writing that both parties sign. This Agreement shall inure to the benefit of the College and Contractor and the College's successors and assigns.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

AWARDEE ONLY – COMPANY NAME	**COMMUNITY COLLEGE OF ALLEGHENY COUNTY**
By: _____	By: Constance Dyer
Signature: _____	Signature: _____
Title: _____	Title: Vice President for Finance
Date: _____	Date: _____

Revised 3/3/15

EXHIBITS - The following Exhibits are attached hereto and made a part of this Agreement for all purposes:

- ☐ **Exhibit A - Contractor's Proposal Response**
- ☐ **Exhibit B - Insurance Requirements**
- ☐ **Exhibit C - Contractor's Certificate(s) of Insurance.**
- ☐ **Exhibit D – Performance and Payment Bonds**
- ☐ **Exhibit E – No-Lien Agreement**

COMMUNITY COLLEGE OF ALLEGHENY COUNTY
800 ALLEGHENY AVENUE, PITTSBURGH, PA 15233

NO-LIEN AGREEMENT

"TO BE COMPLETED ONLY BY AWARDEE"
Bid 1136

Made the _____day of_____, 20_____between_____

_____Pittsburgh, Pennsylvania Contractor and Community College of Allegheny County, Pittsburgh, Pennsylvania, Owner.

Whereas, by separate written contract dated and executed the day and year first above written. The Owner and Contractor have entered into a No-Lien Contract (herein described for convenience as the Contract) to furnish all labor, materials, supplies, tools, and equipment necessary to complete the Contract in accordance with the specifications prepared by the Owner, and the provisions on the Contract between the Owner and Contractor, as more particularly recited therein.

NOW, THEREFORE, in consideration of the execution of said Contract for the purchases of and delivery on the premises of the owner and terms and conditions thereof, the Contractor covenants and agrees as follows:

1. The contractor covenants and agrees that no mechanics' claims or liens shall be entered or filed by the Contractor or by any subcontractor or materialsman or by an other person against the building or property of the Owner described more particularly hereinafter, for or on account of any work or labor done, materials, supplies, tools and equipment furnished in, upon, or about the building and property of the Owner described more particularly hereinafter.

2. Any and all right of lien is hereby waived and the Contractor, all subcontractors, all materialsmen, all persons supplying labor, and/or materials and all other persons shall look exclusively to and hold the Contractor and not the property liable for any sums due, however arising.

3. The property as to which this No-Lien Agreement is filed is located at Community College of Allegheny County, _____.

Block/Lot_____

IN WITNESS WHEREOF, the parties hereto, with the intent to be bound legally thereby have duly executed this No-Lien Agreement the day and year first above written.

COMMUNITY COLLEGE OF ALLEGHENY COUNTY (OWNER)

_____
CCAC - VICE PRESIDENT FOR FINANCE (revised 3/16/15)

_____ _____
(CONTRACTOR) WITNESS

COMMUNITY COLLEGE OF ALLEGHENY COUNTY

800 ALLEGHENY AVENUE PITTSBURGH, PA 15233

INSURANCE REQUIREMENTS

FORM B

Indemnification. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Community College of Allegheny County (CCAC), its agents, officers, employees, and volunteers from and against all claims, damages, losses, and expenses (including but not limited to attorney fees and court costs) arising from the acts, errors, mistakes, omissions, work or service of Contractor, its agents, employees, or any tier of its subcontractors in the performance of this Contract. The amount and type of insurance coverage requirements of this Contract will in no way be construed as limiting the scope of indemnification in this Paragraph.

Insurance. Contractor shall maintain during the term of this Contract insurance policies described below issued by companies licensed in Pennsylvania with a current A.M. Best rating of A- or better. At the signing of this Contract, and prior to the commencement of any work, Contractor shall furnish the CCAC Purchasing Department with a **Certificate of Insurance** evidencing the required coverages, conditions, and limits required by this Contract at the following address: Community College of Allegheny County, Purchasing Department, 800 Allegheny Avenue, Pittsburgh, PA 15233.

The insurance policies, except Workers' Compensation and Professional Liability, shall be endorsed to name Community College of Allegheny County, its agents, officers, employees, and volunteers as Additional Insureds with the following language or its equivalent:

> Community College of Allegheny County, its agents, officers, employees, and volunteers are hereby named as additional insureds as their interest may appear.

All such Certificates shall provide a 30-day notice of cancellation. Renewal Certificates must be provided for any policies that expire during the term of this Contract. Certificate must specify whether coverage is written on an Occurrence or a Claims Made Policy form.

Insurance coverage required under this Contract is:

1) **Commercial General Liability** insurance with a limit of not less than $1,000,000 per occurrence for bodily injury, property damage, personal injury, products and completed operations, and blanket contractual coverage, including but not limited to the liability assumed under the indemnification provisions of this Contract.

2) **Automobile Liability** insurance with a combined single limit for bodily injury and property damage of not less than $1,000,000 each occurrence with respect to Contractor's owned, hired, and non-owned vehicles.

3) **Workers' Compensation** insurance with limits statutorily required by any Federal or State law and **Employer's Liability** insurance of not less than $100,000 for each accident, $100,000 disease for each employee, and $500,000 disease policy limit.

4) **Professional Liability** insurance (where applicable) covering acts, errors, mistakes, and omissions arising out of the work or services performed by the Contractor, or any person employed by the Contractor, with a limit of not less than $1,000,000 each claim.

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project Name:	Building Envelope Renovation - Milton Hall
General Description:	Masonry repair - building envelope restoration
Project Locality	Pittsburgh
Awarding Agency:	Community College of Allegheny County
Contract Award Date:	3/1/2025
Serial Number:	25-00874
Project Classification:	Building
Determination Date:	1/24/2025
Assigned Field Office:	Pittsburgh
Field Office Phone Number:	(412)565-5300
Toll Free Phone Number:	(877)504-8354
Project County:	Allegheny County

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	8/1/2023		$42.40	$29.01	$71.41
Asbestos & Insulation Workers	8/1/2024		$43.40	$29.51	$72.91
Boilermakers	6/1/2016		$40.90	$27.61	$68.51
Bricklayer	6/1/2024		$40.25	$25.34	$65.59
Bricklayer	12/1/2024		$41.00	$25.59	$66.59
Carpenters - Piledriver/Welder	1/1/2023		$40.63	$21.22	$61.85
Carpenters - Piledriver/Welder	1/1/2024		$42.13	$21.97	$64.10
Carpenters - Piledriver/Welder	1/1/2025		$43.38	$22.72	$66.10
Carpenters - Piledriver/Welder	1/1/2026		$44.63	$23.47	$68.10
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2023		$39.69	$19.93	$59.62
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2024		$41.49	$19.93	$61.42
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2025		$43.34	$19.93	$63.27
Cement Masons	6/1/2023		$33.07	$23.59	$56.66
Cement Masons	7/1/2024		$34.57	$25.09	$59.66
Drywall Finisher	6/1/2023		$32.39	$23.75	$56.14
Drywall Finisher	6/1/2024		$34.01	$24.88	$58.89
Electricians & Telecommunications Installation Technician	12/22/2023		$48.61	$31.80	$80.41
Electricians & Telecommunications Installation Technician	12/27/2024		$50.86	$32.69	$83.55
Electricians & Telecommunications Installation Technician	12/26/2025		$54.16	$32.69	$86.85
Elevator Constructor	1/1/2023		$56.14	$42.83	$98.97
Elevator Constructor	1/1/2024		$58.55	$43.87	$102.42
Elevator Constructor	1/1/2025		$61.07	$40.05	$101.12
Glazier	9/1/2023		$35.65	$30.05	$65.70
Iron Workers	6/1/2023		$38.89	$35.02	$73.91
Iron Workers	6/1/2024		$39.89	$36.47	$76.36
Laborers (Class 01 - See notes)	1/1/2023		$25.82	$19.46	$45.28
Laborers (Class 01 - See notes)	1/1/2024		$26.82	$19.46	$46.28
Laborers (Class 01 - See notes)	1/1/2025		$27.32	$19.96	$47.28
Laborers (Class 01 - See notes)	1/1/2026		$27.82	$20.46	$48.28
Laborers (Class 02 - See notes)	1/1/2023		$25.97	$19.46	$45.43
Laborers (Class 02 - See notes)	1/1/2024		$26.97	$19.46	$46.43
Laborers (Class 02 - See notes)	1/1/2025		$27.47	$19.96	$47.43
Laborers (Class 02 - See notes)	1/1/2026		$27.97	$20.46	$48.43
Laborers (Class 03 - See notes)	1/1/2023		$28.97	$19.46	$48.43
Laborers (Class 03 - See notes)	1/1/2024		$29.97	$19.46	$49.43
Laborers (Class 03 - See notes)	1/1/2025		$30.47	$19.96	$50.43
Laborers (Class 03 - See notes)	1/1/2026		$30.97	$20.46	$51.43
Laborers (Class 04 - See notes)	1/1/2021		$23.57	$19.32	$42.89
Landscape Laborer (Skilled)	1/1/2024		$24.79	$18.53	$43.32
Landscape Laborer (Skilled)	1/1/2025		$25.79	$18.78	$44.57

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Landscape Laborer (Skilled)	1/1/2026		$26.79	$19.03	$45.82
Landscape Laborer (Tractor Operator)	1/1/2024		$25.09	$18.53	$43.62
Landscape Laborer (Tractor Operator)	1/1/2025		$26.09	$18.78	$44.87
Landscape Laborer (Tractor Operator)	1/1/2026		$27.09	$19.03	$46.12
Landscape Laborer	1/1/2024		$24.37	$18.53	$42.90
Landscape Laborer	1/1/2025		$25.37	$18.78	$44.15
Landscape Laborer	1/1/2026		$26.37	$19.03	$45.40
Millwright	6/1/2020		$41.68	$20.32	$62.00
Operators (Class 01 - see notes)	6/1/2022		$38.89	$23.69	$62.58
Operators (Class 01 - see notes)	6/1/2023		$40.69	$23.89	$64.58
Operators (Class 01 - see notes)	6/1/2024		$41.69	$24.39	$66.08
Operators (Class 02 -see notes)	6/1/2022		$32.82	$23.69	$56.51
Operators (Class 02 -see notes)	6/1/2023		$34.62	$23.89	$58.51
Operators (Class 02 -see notes)	6/1/2024		$35.62	$24.39	$60.01
Operators (Class 03 - See notes)	6/1/2022		$30.03	$23.69	$53.72
Operators (Class 03 - See notes)	6/1/2023		$31.83	$23.89	$55.72
Operators (Class 03 - See notes)	6/1/2024		$32.83	$24.39	$57.22
Painters Class 6 (see notes)	6/1/2023		$30.56	$24.01	$54.57
Painters Class 6 (see notes)	6/1/2024		$32.14	$24.93	$57.07
Painters Class 6 (see notes)	6/1/2025		$34.16	$25.81	$59.97
Piledrivers	1/1/2023		$39.13	$21.22	$60.35
Piledrivers	1/1/2024		$40.63	$21.97	$62.60
Piledrivers	1/1/2025		$41.88	$22.72	$64.60
Piledrivers	1/1/2026		$43.13	$23.47	$66.60
Plasterers	6/1/2023		$32.14	$20.54	$52.68
Plasterers	6/1/2024		$33.14	$21.04	$54.18
plumber	6/1/2023		$48.65	$25.87	$74.52
plumber	6/1/2024		$51.75	$25.87	$77.62
plumber	6/1/2025		$54.95	$25.87	$80.82
plumber	6/1/2026		$58.05	$25.87	$83.92
plumber	6/1/2027		$61.15	$25.87	$87.02
Pointers, Caulkers, Cleaners	12/1/2022		$35.47	$20.88	$56.35
Pointers, Caulkers, Cleaners	6/1/2024		$38.59	$21.36	$59.95
Pointers, Caulkers, Cleaners	12/1/2024		$39.69	$21.61	$61.30
Roofers	6/1/2023		$37.00	$19.92	$56.92
Roofers	6/2/2024		$38.00	$20.67	$58.67
Sheet Metal Workers	8/1/2023		$41.00	$32.94	$73.94
Sheet Metal Workers	7/1/2024		$43.00	$33.96	$76.96
Sign Makers and Hangars	7/15/2023		$31.76	$24.63	$56.39
Sign Makers and Hangars	7/15/2024		$32.32	$25.82	$58.14
Sprinklerfitters	7/1/2023		$43.84	$25.50	$69.34
Sprinklerfitters	1/1/2024		$43.28	$26.06	$69.34
Sprinklerfitters	7/1/2024		$45.38	$26.46	$71.84
Sprinklerfitters	1/1/2025		$44.79	$27.05	$71.84

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Steamfitters	6/1/2023		$46.10	$28.37	$74.47
Steamfitters	6/1/2024		$48.15	$29.57	$77.72
Stone Masons	6/1/2024		$42.35	$23.97	$66.32
Stone Masons	12/1/2024		$43.10	$24.22	$67.32
Terrazzo Finisher	6/1/2023		$39.79	$18.47	$58.26
Terrazzo Finisher	12/1/2024		$41.04	$18.72	$59.76
Terrazzo Mechanics	12/1/2022		$35.49	$20.32	$55.81
Terrazzo Mechanics	6/1/2024		$39.14	$20.77	$59.91
Terrazzo Mechanics	12/1/2024		$40.39	$21.02	$61.41
Tile Finisher	12/1/2022		$28.76	$17.34	$46.10
Tile Finisher	6/1/2024		$31.56	$17.74	$49.30
Tile Finisher	12/1/2024		$32.51	$17.99	$50.50
Tile Setter	12/1/2022		$35.64	$21.81	$57.45
Tile Setter	6/1/2024		$38.46	$22.19	$60.65
Tile Setter	12/1/2024		$39.41	$22.44	$61.85
Truckdriver class 1(see notes)	1/1/2023		$33.18	$22.21	$55.39
Truckdriver class 1(see notes)	1/1/2024		$34.93	$22.71	$57.64
Truckdriver class 1(see notes)	1/1/2025		$36.43	$23.21	$59.64
Truckdriver class 1(see notes)	1/1/2026		$37.93	$23.71	$61.64
Truckdriver class 2 (see notes)	1/1/2023		$33.64	$22.52	$56.16
Truckdriver class 2 (see notes)	1/1/2024		$35.39	$23.02	$58.41
Truckdriver class 2 (see notes)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41
Window Film / Tint Installer	10/1/2019		$25.00	$2.63	$27.63

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	1/1/2023		$38.60	$20.59	$59.19
Carpenter	1/1/2024		$40.10	$21.34	$61.44
Carpenter	1/1/2025		$41.35	$22.09	$63.44
Carpenter	1/1/2026		$42.60	$22.84	$65.44
Carpenter Welder	1/1/2023		$40.10	$20.59	$60.69
Carpenter Welder	1/1/2024		$41.60	$21.34	$62.94
Carpenter Welder	1/1/2025		$42.85	$22.09	$64.94
Carpenter Welder	1/1/2026		$44.10	$22.84	$66.94
Carpenters - Piledriver/Welder	1/1/2023		$40.63	$21.22	$61.85
Carpenters - Piledriver/Welder	1/1/2024		$42.13	$21.97	$64.10
Carpenters - Piledriver/Welder	1/1/2025		$43.38	$22.72	$66.10
Carpenters - Piledriver/Welder	1/1/2026		$44.63	$23.47	$68.10
Cement Finishers	1/1/2023		$34.14	$25.05	$59.19
Cement Finishers	1/1/2024		$35.14	$26.30	$61.44
Cement Finishers	1/1/2025		$35.94	$27.50	$63.44
Cement Masons	1/1/2020		$32.84	$21.10	$53.94
Electric Lineman	5/29/2023		$52.56	$29.99	$82.55
Electric Lineman	6/3/2024		$53.97	$31.05	$85.02
Electricians & Telecommunications Installation Technician	12/22/2023		$48.61	$31.80	$80.41
Electricians & Telecommunications Installation Technician	12/27/2024		$51.76	$31.80	$83.56
Electricians & Telecommunications Installation Technician	12/26/2025		$55.06	$31.80	$86.86
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2023		$38.89	$35.02	$73.91
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2024		$39.89	$36.47	$76.36
Laborers (Class 01 - See notes)	1/1/2023		$29.95	$25.50	$55.45
Laborers (Class 01 - See notes)	1/1/2024		$32.20	$25.50	$57.70
Laborers (Class 01 - See notes)	1/1/2025		$33.70	$26.00	$59.70
Laborers (Class 01 - See notes)	1/1/2026		$34.70	$27.00	$61.70
Laborers (Class 02 - See notes)	1/1/2023		$30.11	$25.50	$55.61
Laborers (Class 02 - See notes)	1/1/2024		$32.36	$25.50	$57.86
Laborers (Class 02 - See notes)	1/1/2025		$33.86	$26.00	$59.86
Laborers (Class 02 - See notes)	1/1/2026		$34.86	$27.00	$61.86
Laborers (Class 03 - See notes)	1/1/2023		$30.50	$25.50	$56.00
Laborers (Class 03 - See notes)	1/1/2024		$32.75	$25.50	$58.25
Laborers (Class 03 - See notes)	1/1/2025		$34.25	$26.00	$60.25
Laborers (Class 03 - See notes)	1/1/2026		$35.25	$27.00	$62.25
Laborers (Class 04 - See notes)	1/1/2023		$30.95	$25.50	$56.45
Laborers (Class 04 - See notes)	1/1/2024		$33.20	$25.50	$58.70
Laborers (Class 04 - See notes)	1/1/2025		$34.70	$26.00	$60.70
Laborers (Class 04 - See notes)	1/1/2026		$35.70	$27.00	$62.70
Laborers (Class 05 - See notes)	1/1/2023		$31.36	$25.50	$56.86
Laborers (Class 05 - See notes)	1/1/2024		$33.61	$25.50	$59.11

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 05 - See notes)	1/1/2025		$35.11	$26.00	$61.11
Laborers (Class 05 - See notes)	1/1/2026		$36.11	$27.00	$63.11
Laborers (Class 06 - See notes)	1/1/2023		$28.20	$25.50	$53.70
Laborers (Class 06 - See notes)	1/1/2024		$30.45	$25.50	$55.95
Laborers (Class 06 - See notes)	1/1/2025		$31.95	$26.00	$57.95
Laborers (Class 06 - See notes)	1/1/2026		$32.95	$27.00	$59.95
Laborers (Class 07 - See notes)	1/1/2023		$30.95	$25.50	$56.45
Laborers (Class 07 - See notes)	1/1/2024		$33.20	$25.50	$58.70
Laborers (Class 07 - See notes)	1/1/2025		$34.70	$26.00	$60.70
Laborers (Class 07 - See notes)	1/1/2026		$35.70	$27.00	$62.70
Laborers (Class 08 - See notes)	1/1/2023		$32.45	$25.50	$57.95
Laborers (Class 08 - See notes)	1/1/2024		$34.70	$25.50	$60.20
Laborers (Class 08 - See notes)	1/1/2025		$36.20	$26.00	$62.20
Laborers (Class 08 - See notes)	1/1/2026		$37.20	$27.00	$64.20
Millwright	6/1/2023		$45.50	$23.72	$69.22
Millwright	6/1/2024		$47.59	$23.72	$71.31
Millwright	6/1/2025		$49.72	$23.72	$73.44
Operators (Class 01 - see notes)	1/1/2023		$36.79	$23.58	$60.37
Operators (Class 01 - see notes)	1/1/2024		$38.59	$24.03	$62.62
Operators (Class 01 - see notes)	1/1/2025		$40.39	$24.23	$64.62
Operators (Class 01 - see notes)	1/1/2026		$41.96	$24.66	$66.62
Operators (Class 02 -see notes)	1/1/2023		$36.53	$23.58	$60.11
Operators (Class 02 -see notes)	1/1/2024		$38.33	$24.03	$62.36
Operators (Class 02 -see notes)	1/1/2025		$40.13	$24.23	$64.36
Operators (Class 02 -see notes)	1/1/2026		$41.70	$24.66	$66.36
Operators (Class 03 - See notes)	1/1/2023		$32.88	$23.58	$56.46
Operators (Class 03 - See notes)	1/1/2024		$34.68	$24.03	$58.71
Operators (Class 03 - See notes)	1/1/2025		$36.48	$24.23	$60.71
Operators (Class 03 - See notes)	1/1/2026		$38.05	$24.66	$62.71
Operators (Class 04 - See notes)	1/1/2023		$32.42	$23.58	$56.00
Operators (Class 04 - See notes)	1/1/2024		$34.22	$24.03	$58.25
Operators (Class 04 - See notes)	1/1/2025		$36.02	$24.23	$60.25
Operators (Class 04 - See notes)	1/1/2026		$37.59	$24.66	$62.25
Operators (Class 05 - See notes)	1/1/2023		$32.17	$23.58	$55.75
Operators (Class 05 - See notes)	1/1/2024		$33.97	$24.03	$58.00
Operators (Class 05 - See notes)	1/1/2025		$35.77	$24.23	$60.00
Operators (Class 05 - See notes)	1/1/2026		$37.34	$24.66	$62.00
Operators Class 1-A	1/1/2023		$39.79	$23.58	$63.37
Operators Class 1-A	1/1/2024		$41.59	$24.03	$65.62
Operators Class 1-A	1/1/2025		$43.39	$24.23	$67.62
Operators Class 1-A	1/1/2026		$44.96	$24.66	$69.62
Operators Class 1-B	1/1/2023		$38.79	$23.58	$62.37
Operators Class 1-B	1/1/2024		$40.59	$24.03	$64.62
Operators Class 1-B	1/1/2025		$42.39	$24.23	$66.62

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 25-00874 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators Class 1-B	1/1/2026		$43.96	$24.66	$68.62
Painters Class 1 (see notes)	6/1/2022		$34.45	$22.82	$57.27
Painters Class 2 (see notes)	6/1/2023		$36.01	$24.01	$60.02
Painters Class 2 (see notes)	6/1/2024		$38.09	$24.93	$63.02
Painters Class 2 (see notes)	6/1/2025		$40.36	$25.81	$66.17
Painters Class 3 (see notes)	6/1/2023		$38.33	$24.01	$62.34
Painters Class 3 (see notes)	6/1/2024		$40.66	$24.93	$65.59
Painters Class 3 (see notes)	6/1/2025		$43.69	$25.81	$69.50
Painters Class 4 (see notes)	6/1/2019		$28.20	$20.06	$48.26
Painters Class 5 (see notes)	6/1/2019		$22.91	$20.06	$42.97
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		$58.70	$21.22	$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		$60.95	$21.97	$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		$62.82	$22.72	$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		$64.70	$23.47	$88.17
Piledrivers	1/1/2023		$39.13	$21.22	$60.35
Piledrivers	1/1/2024		$40.63	$21.97	$62.60
Piledrivers	1/1/2025		$41.88	$22.72	$64.60
Piledrivers	1/1/2026		$43.13	$23.47	$66.60
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		$48.43	$40.28	$88.71
Truckdriver class 1(see notes)	1/1/2023		$33.18	$22.21	$55.39
Truckdriver class 1(see notes)	1/1/2024		$34.93	$22.71	$57.64
Truckdriver class 1(see notes)	1/1/2025		$36.43	$23.21	$59.64
Truckdriver class 1(see notes)	1/1/2026		$37.93	$23.71	$61.64
Truckdriver class 2 (see notes)	1/1/2023		$33.64	$22.52	$56.16
Truckdriver class 2 (see notes)	1/1/2024		$35.39	$23.02	$58.41
Truckdriver class 2 (see notes)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41

Project Labor Agreement

February 15, 2011

ARTICLE I

INTENT AND DURATION

Section 1. Intent and Duration. This Project Labor Agreement (the "Agreement") is entered into between the Community College of Allegheny County ("CCAC"); **[Name of Contractor]** as [Trade] Contractor and the Pittsburgh Regional Building and Construction Trades Council of Pittsburgh, AFL-CIO ("BCTC"); and the Signatory Unions (the "Unions") and applies exclusively to the construction work within the scope of this Agreement to be performed on the CCAC's BID PROPOSAL. (the "Project"). The purpose of this Agreement is to promote efficiency in the construction of the Project and to provide for the peaceful settlement of any and all labor disputes and grievances without strikes or lockouts, thereby promoting the public interest in assuring the timely and economical completion of the Project

Upon execution of this Agreement by all parties, all construction work covered by this Agreement on the Project shall be contracted exclusively to Contractors who agree to execute and be bound by the terms of this Agreement. The Unions agree that other Contractors may execute the Agreement for purposes of performing such work. The Prime Contractors shall monitor compliance with this Agreement by all contractors, who through their execution of a Letter of Assent hereto, together with their subcontractors, shall become bound hereto. For purposes of this Agreement, the term "Contractor" shall be deemed to include all Prime construction contractors and subcontractors of whatever tier engaged in on-site construction work on the Project.

The Prime Contractors, the Unions and all signatory Contractors agree to abide by the terms and conditions contained in the Agreement. This Agreement represents the complete understanding of all parties, and no Contractor is or will be required to sign any other agreement with a signatory union as a condition of performing work coming within the scope of this Agreement. No practice, understanding or agreement between a Contractor and a Union which is not specifically set forth in this Agreement will be binding on any other party unless endorsed in writing by the Prime Contractor.

Section 2. Limitation of Agreement to Project The Unions agree that this Agreement will be made available to, and will fully apply to, any successful bidder for work on the Project, without regard to whether that successful bidder performs work at other sites on either a union or a non-union basis, and without regard to whether employees of such bidder are or are not members of any union. The Unions further agree that this Agreement applies only to this Project, and that by signing the Letter of Assent hereto, a Contractor, not previously in signed agreement with the Unions, does not recognize the Unions as the bargaining representative of any of its employees at any other project, site or location. It is the intent of this Agreement that Contractors who sign it will create a relationship with the Unions governed by the provisions of Section 8(f) of the Labor Management Relations Act, 29 U.S.C. §158(f).

ARTICLE II

PURPOSE

Section 1. Purpose. The parties signatory to this Agreement accordingly pledge their complete good faith and trust to work towards an absolutely on-time completion of the Project. The signatory parties further pledge to demonstrate nationally that Western Pennsylvania enjoys a mature labor relations climate and continues to be the number one location in the United States to live and work.

Section 2. Time is of the Essence. The parties to this Agreement understand and agree that time is of the essence for this Project. The parties understand and agree that the CCAC and the Prime Contractors have a critical need for timely completion of the Project, as the Project must be completed prior to (SEE SPECIFICATIONS). Timely completion of the Project without interruption or delay is therefore vital. The parties understand and agree that timely construction of the Project will require substantial numbers of employees from construction and supporting crafts possessing skills and qualifications that are essential to its completion; the Unions pledge that they have members who are competent, skilled, and qualified to perform the required construction work. The parties also understand that on-budget completion of the Project is most critical; it is therefore essential that construction work on the Project be done in an efficient, economical manner with optimum productivity and no delays. In recognition of those special needs of the Project, Unions signatory hereto and their members agree not to initiate, authorize, sanction, participate in or condone, or permit their members to engage in, any strike, sympathy strike, jurisdictional strike, recognitional strike, slowdown, sabotage, work to rule, sickout, sit down, picketing of any type (including informational picketing), hand billing, boycott, interruption of work or any disruptive activity that interferes with or interrupts in any way work on the Project. Contractors agree not to engage in any lockouts.

ARTICLE III

BENEFITS OF THE AGREEMENT

Section 1. Benefits of the Agreement. This Agreement is intended to foster the achievement of a timely and on-budget completion of the Project by, among other things:

(a) avoiding the costly delays of potential strikes, sympathy strikes, jurisdictional strikes, slowdowns, walkouts, picketing, handbilling and any other disruptions or interference with work, and promoting labor harmony and peace for the duration of the Project;
(b) standardizing terms and conditions governing the employment of labor on the Project;
(c) permitting a wide flexibility in work scheduling, shift hours, and starting times;
(d) achieving negotiated adjustments as to work rules and staffing requirements from those which otherwise might obtain;
(e) providing comprehensive and standardized mechanisms for the settlement of work disputes;
(f) ensuring a reliable source of skilled and experienced labor; and
(g) furthering public policy objectives, to the extent lawful, as to improved employment opportunities for the Minority Business Enterprises, Women Business Enterprises.

ARTICLE IV

SCOPE OF THE AGREEMENT

Section 1. The Work. This Agreement is specifically defined and limited to onsite construction work required to construct the Project.

Section 2. Exclusions from Scope. Items specifically excluded from the scope of this Agreement, even if performed in connection with the Project, include the following:

(a) Work of non-manual employees, including but not limited to, superintendents, supervisors, staff engineers, inspectors, quality control and quality assurance personnel, timekeepers, mail carriers, clerks, office workers including messengers, guards, safety personnel, emergency medical and first aid technicians, and other professional, engineering, administrative, supervisory and management employees.

(b) Equipment and machinery owned or controlled and operated by CCAC.

(c) All off-site manufacture, fabrication or handling of materials, equipment or machinery (except at dedicated lay-down or storage areas), and all deliveries of any type to and from the Project site.

(d) All employees of CCAC; the Prime Contractors, the design team or any other consultant when such employees do not perform manual labor coming within the scope of this Agreement.

(e) Any work performed on or near or leading to or onto the site of work on the Project and undertaken by state, county, city or other governmental bodies, or their contractors; or by public utilities or their contractors.

(f) Off-site maintenance of leased equipment and on-site supervision of all such maintenance work.

(g) Work by employees of a manufacturer or vendor necessary to maintain such manufacturer's or vendor's warranty or guarantee, unless such work has historically and customarily been performed by members of a signatory union, or work performed by supervisors or technicians employed by the manufacturer or vendor to oversee the testing of equipment once installed to insure that the equipment is fully operational.

(h) Laboratory work for specialty testing or inspections not ordinarily done by the signatory local unions.

(i) All work done by employees of CCAC, or of any State agency, authority or entity or employees of any municipality or other public employer.

(j) All employees and entities engaged in ancillary Project work performed by electric utilities, gas utilities and telephone companies.

(k) It is further agreed that, where there is a conflict, the terms and conditions of this Project Agreement shall supersede and override terms and conditions of any and all other national, area, or local collective bargaining agreements, except for all work performed under the NTL Articles of Agreement. The National Stack/Chimney Agreement, and the National Cooling Tower Agreement, all instrument calibration work and loop

checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians, and the National Agreement of the International Union of Elevator Constructors, with the exception of Article 8 (Work Stoppages and Lockouts); Article 10 (Grievance & Arbitration Procedure); and Article 11 (Jurisdictional Disputes) of this Project Agreement, which shall apply to such work. (see attached model PLA-Article II, Section 1)

The Unions agree that there shall be no interference with, or disruption of work, of those contractors, employers and employees exempted from coverage of this Agreement by subparagraph (a) through (k) above.

Section 3. Contract Award and Consent to Agreement.

(a) The Prime Contractors, and/or Contractors, as appropriate have the absolute right to award contracts or subcontracts on the Project notwithstanding the existence or nonexistence of any Agreements between such contractor and any Union party provided only that such Contractor is willing, ready and able to execute and comply with this Agreement or a Letter of Assent thereto, should such Contractor be awarded work covered by this Agreement.

(b) All subcontractors of a Contractor, of whatever tier, who have been awarded contracts of work covered by this Agreement on or after the effective date of this Agreement shall also be required to accept to be bound by the terms and conditions of this Agreement, and shall evidence their acceptance by the execution of this Agreement or a Letter of Assent thereto, prior to the commencement of work. A copy of this Agreement or Letter of Assent executed by each Contractor shall be available for review by the Unions.

Section 4. Stand-Alone Agreement. This Agreement is a stand alone agreement. While this Agreement expressly does not incorporate any local area collective bargaining agreements, such local area collective bargaining agreements may be referenced for the limited purposes as hereinafter set forth in this Agreement. However, to the extent, if any, that any provisions of this Agreement conflict with any provision of a local area collective bargaining agreement, the provisions of this Agreement shall control.

Section 5. Craft Jurisdiction. This Agreement shall recognize the traditional craft jurisdictions of the signatory unions. Any and all jurisdictional disputes shall be settled in accordance with Article VIII below. While this Agreement is a stand-alone Agreement and expressly does not incorporate any local area collective bargaining agreements, the Agreement will utilize the local area collective bargaining agreements of signatory locals as a reference to define the signatory local unions' craft jurisdiction.

Section 6. Subcontracting. CCAC agrees that neither it nor any of its contractors or subcontractors will subcontract any work covered by this Agreement to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor working on the Project shall, as a condition to working on said Project, become a

signatory to and perform all work under the terms of this Agreement. Contractors who are signatory to local collective bargaining agreements shall be bound by the terms of their respective local collective bargaining agreements on subcontracting to the extent such terms are consistent with Article IV, Section 2 of this Agreement. Disputes concerning compliance with such local subcontracting provisions for this project shall be subject to all of the dispute resolution provisions of this Agreement.

Section 7. Liability. It is understood that the liability of the Contractor and the liability of the separate Unions under this Agreement shall be several and not joint. The Unions agree that this Agreement does not have the effect of creating any joint employer status between or among CCAC and/or any Contractor and CCAC shall not assume any liabilities of the Contractors.

Section 8. Abatement of Agreement. As areas of covered work on the Project are accepted by CCAC, this Agreement shall have no further force or effect on such areas except where the Contractor is directed by CCAC to engage in repairs or punch list modifications.

ARTICLE V

LABOR/MANAGEMENT COOPERATION JOINT ADMINISTRATIVE COMMITTEE

Section 1. The parties to this Agreement shall establish a Project Joint Administrative Committee ("Committee"). This Committee will be a three-person committee comprised of one member each from the Prime Contractor, from CCAC, and from the signatory Unions, with an alternate signatory Union member available to replace the regular volunteer when a problem or grievance concerns the regular member's Union. The members of the Project Joint Administrative Committee shall be appointed by their respective principals at a time to be determined after the time the Prime Contracts are awarded. Each member of the Committee shall designate an alternate who shall serve in the absence of the member for any purpose contemplated by this Agreement.

Section 2. The Committee shall meet at least quarterly or more often if special circumstances warrant, to discuss the administration of the Agreement, the progress of the Project, labor/management problems that may arise, and any other relevant matters. Any need for interpretation which might arise from the application of the terms and conditions of the Agreement shall be referred directly to the Committee for resolution.

ARTICLE VI

UNION RECOGNITION AND EMPLOYMENT

Section 1. Pre-Hire Recognition. Each Contractor recognizes the Unions as the sole and exclusive bargaining representative of all craft employees within their respective jurisdictions working on the Project under the Agreement. It is contemplated that such recognition under this Agreement is pursuant to the provisions of Section 8(f) of the Labor Management Relations Act, 29 U.S.C. §158(f) unless the signatory Contractor and Unions have another, preexisting legal relationship.

Section 2. Contractor's Right of Selection. Each Contractor shall have the right to determine the competency of all employees, the number of employees required and shall have the sole responsibility for selecting employees to be laid off.

Section 3. Union Referral. For Local Unions having a job referral system, each Contractor agrees to comply with such system, and the referral system shall be used exclusively by such Contractor, except as modified by this Article. Such job referral system will be operated in a non-discriminatory manner and in full compliance with Federal, State, and Local laws and regulations requiring equal employment opportunities and non-discrimination, and referrals shall not be affected in any way by the rules, regulations, by-laws, constitutional provisions or any other aspects or obligations of union membership, policies or requirements. The Union shall indemnify and hold each Contractor harmless with respect to any claim arising out of how the Union operates and administers its referral system. All hiring procedures, including related practices affecting apprenticeship and training, will be operated so as to facilitate the ability of the contractors to meet any and all equal employment opportunity/affirmative action obligations. The Contractor may reject any referral for any reason and request another, different referral.

Section 4. Lack of Job Referral System. In the event that a signatory Local Union does not have a job referral system as set forth in Section 3 above, the Contractor shall give the Union forty-eight (48) hours to refer applicants. The Contractor may reject any referral for any reason and request another, different referral. The Contractor shall notify the Union of employees hired from any source other than referral by the Union.

Section 5. Unavailability of Union Referrals. In the event that Local Unions are unable to fill any requisitions for qualified employees within forty-eight (48) hours after such requisition is made by the Contractor (Saturdays, Sundays, and Holidays excepted), the Contractor may employ applicants from any other available source. The Contractor shall inform the Union of the name and social security number of any applicants hired from other sources and refer the applicant to the Local Union for dispatch to the Project.

Section 6. No Cross-Referrals. The Local Unions shall not knowingly refer an employee currently employed by any Contractor working under this Agreement to any other Contractor, nor shall any Union engage in any activity which encourages workforce turnover or absenteeism.

Section 7. Union Best Efforts. The Local Unions will exert their utmost efforts to recruit sufficient numbers of skilled craft workers to fulfill the manpower requirements of each Contractor, including calls to local unions in other geographical areas when its referral lists have been exhausted.

Section 8. Non-Discrimination. No employee covered by this Agreement shall be required to join any Union or pay any agency fees or dues as a condition of being employed, or remaining employed, on the Project. Where, however, there is in effect and in the possession of the Contractor a voluntary written dues deduction authorization executed by the employee on a standard form furnished by the Union, the Contractor agrees to deduct union dues from the pay of the employee and to remit the dues to the Union at the same time that trust fund contributions are required to be remitted to the administrators of the appropriate trust funds on behalf of that employee.

Section 9. Core Employees. To provide opportunities to participate on the Project to minority and women owned business enterprises as well as other enterprises which do not have a relationship with the Unions signatory to this Agreement and to ensure that such enterprises will have an opportunity to employ their "core" employees on this Project, the parties agree that any such enterprise has the right to select core employees whom it will employ on site, in accordance with the formula below and who:

(a) possess any license required by the state or federal law for the Project work to be performed;
(b) have worked a total of at least 1,200 hours per year in the construction craft during each of the prior 3 years, including participating in a state certified apprenticeship program;
(c) were on the Contractor's active payroll for at least 60 out of the 180 calendar days prior to the contract award;
(d) have the ability to perform safely the basic functions of the applicable trade.

The first employee and the third employee, or up to ten (10) percent of all employees, whichever is greater, hired by each contractor may be core employees. After such core employees have been hired by any contractor, all the employees shall thereafter be hiring hall referrals by the appropriate signatory unions in accordance with the provisions of the applicable local collective bargaining agreements.

Section 10. Craft and General Forepersons. The selection of craft foreman and/or general foreman and the number foreman required shall be the exclusive right and responsibility of each contractor.

ARTICLE VII

DISPUTES AND GRIEVANCES

Section 1. This Agreement is intended to provide close cooperation between management and labor. Each of the Unions will assign a representative to this Project for the purpose of completing the construction of the Project economically, efficiently, continuously, and without interruptions, delays, or work stoppages.

Section 2. The Contractors, Unions and the employees, collectively and individually, realize the importance to all parties to maintain continuous and uninterrupted performance of the work of the Project, and agree to resolve disputes in accordance with the grievance-arbitration provisions set forth in this Article.

Section 3. Any question or dispute arising out of and during the term of this Project Agreement (other than trade jurisdictional disputes) shall be considered a grievance and subject to resolution under the following procedures:

Step 1. (a) When any employee subject to the provisions of this Agreement feels he or she is aggrieved by a violation of this Agreement, he or she, through his or her local union business representative or job steward, shall, within five (5) working days after the occurrence of the

violation, give notice to the work-site representative of the involved Contractor stating the provision(s) alleged to have seen violated. The business representative of the local union or the job steward and the work-site representative of the involved Contractor and the Prime Contractor shall meet and endeavor to adjust the matter within three (3) working days after timely notice has been given.

The representative of the Contractor shall keep the meeting minutes and shall respond to the Union representative in writing (copying the Prime Contractor) at the conclusion of the meeting but not later than twenty-four (24) hours thereafter. If they fail to resolve the matter within the prescribed period, the grieving party may, within forty-eight (48) hours thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth the relevant information concerning the alleged grievance, including a short description thereof, the date on which the grievance occurred, and the provision(s) of the Agreement alleged to have been violated.

(b) Should the Local Union(s) or the Prime Contractor or any Contractor have a dispute with the other party and, if after conferring, a settlement is not reached within three (3) working days, the dispute may be reduced to writing and proceed to Step 2 in the same manner as outlined herein for the adjustment of an employee complaint.

Step 2. The International Union Representative and the involved Contractor shall meet within seven (7) working days of the referral of a dispute to this second step to arrive at a satisfactory settlement thereof. Meeting minutes shall be kept by the Contractor. If the parties fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

Step 3. (a) If the grievance has been submitted but not adjusted under Step 2, either party may request in writing, within seven (7) calendar days thereafter, that the grievance be submitted to an Arbitrator mutually agreed upon by them. The Contractor and the involved Union shall attempt mutually to select an arbitrator, but if they are unable to do so, they shall request the American Arbitration Association to provide them with a list of arbitrators from which the Arbitrator shall be selected. The rules of the American Arbitration Association shall govern the conduct of the arbitration hearing. The decision of the Arbitrator shall be final and binding on all parties. The fee and expenses of such Arbitration shall be borne equally by the Contractor and the involved Local Union(s).

(b) Failure of the grieving party to adhere to the time limits established herein shall render the grievance null and void. The time limits established herein may be extended only by written consent of the parties involved at the particular step where the extension is agreed upon. The Arbitrator shall have the authority to make decisions only on issues presented to him or her, and he or she shall not have authority to change, amend, add to or detract from any of the provisions of this Agreement.

Section 4. The Prime Contractor and Owner shall be notified of all actions at Steps 2 and 3 and shall, upon their request, be permitted to participate in all proceedings at these steps.

ARTICLE VIII

JURISDICTIONAL DISPUTES

Section 1. The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

Section 2. All jurisdictional disputes on this Project, between or among Building and Construction Trades Unions and employers shall be settled and adjusted according to the present Plan established by the Building and Construction Trades Department or any other plan or method of procedure that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final binding and conclusive on the Contractors and Unions parties to this Agreement.

Section 3. All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, or slow-down of any nature, and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

Section 4. Each Contractor will conduct a pre-job conference with the appropriate Building and Construction Trades Council prior to commencing work. The Prime Contractor and the Owner will be advised in advance of all such conferences and may participate if they wish.

ARTICLE IX.

MANAGEMENT'S RIGHTS

Section 1. Exclusive Authority – Workforce. The Prime Contractors retain the full and exclusive authority for the management of their operations and workforces. The Prime Contractors retain the right to plan, direct, and control the workforce, including the hiring, promotion, demotion, transfer, layoff, suspension, discipline or discharge for just cause of employees; the determination of crew make-up, crew size and manning levels; the selection of foremen, the assignment and scheduling of work; the promulgation of work rules; and the requirement of overtime work, the determination of when it will be worked and the number and identity of employees engaged in such work. No rules, customs, or practices which limit or restrict productivity, efficiency of the individual and/or joint working efforts of employees shall be permitted or observed. The Prime Contractors may utilize any methods or techniques of construction and operation.

Section 2. Materials, Design, Machinery, Equipment. There shall be no limitation or restriction by a signatory Union upon a Contractor's choice of materials or design, nor, regardless of source or location, upon the full use and utilization of equipment, machinery packaging, pre-cast, pre-fabricated, pre-finish, or pre-assembled materials, tools or other labor saving devices. The on-site installation or application of all items shall be performed by the craft having jurisdiction of such work;

provided, however, that installation of specialty items may be performed by employees employed under this Agreement who may be directed by other personnel in a supervisory role, in circumstances requiring special knowledge of the particular items.

Section 3. Specialty Work. It is recognized by the Contractors, the Unions, and their members that the performance of certain work on the Project shall consist of the installation of certain materials, equipment, or supplies manufactured outside this local vicinity which must, for warranty purposes, be installed by the manufacturer and/or designated specialty contractors and that such installation work is not customarily performed by the members of such unions. The Unions and their members agree that they shall make no claims for such work; provided, however, that the Prime Contractors and/or the Joint Administrative Committee shall provide them with the necessary information establishing the nature of such specialty work.

Section 4. New Technology, Equipment. The use of new technology, equipment, machinery, tools and/or labor saving devices and methods of performing work may be initiated by any Contractor from time to time during the Project. The Union agrees that it will not in any way restrict the implementation of such new devices or work methods.

Section 5. Disputes. If there is any disagreement between any Contractor and the Union concerning the manner or implementation of such device or method of work, the implementation shall proceed as directed by the Contractor, and the Union shall have the right to grieve and/or arbitrate the dispute as set forth in Article VII of this Agreement.

ARTICLE X.

WORK STOPPAGES

Section 1. No Strikes or Work Disruptions. There shall be no strike, sympathy strike, jurisdictional strike, recognitional strike, slowdown, sabotage, work to rule, sickout, sitdown, picketing of any type (including informational picketing), handbilling, boycott, interruption of work or any disruptive activity that interferes with or interrupts in any way work on the Project. The Unions signatory hereto, and each of their members, agree not to initiate, authorize, sanction, participate in, condone, or permit their members to engage in any such activity. Failure of any Union or employee covered by this Agreement to cross any picket line established by any Union, signatory or non-signatory to the Agreement, or by any other organization or individual at or in proximity to the Project construction site, is a violation of this Article. The signatory Union shall be responsible for any action of its members, which violates this section, and its members shall be subject to discipline up to and including discharge for violation of the provisions of this article.

Section 2. Union Responsibilities. The Union shall not sanction, aid or abet, encourage or condone any conduct or activity in violation of this Article, and shall undertake all means to prevent or to terminate any such conduct immediately. No employee shall engage in activities which violate this Article, and the Union shall pursue all disciplinary action permitted by its Constitution and By-laws against any employee who engages in any activity which violates this Article.

Section 3. Violation. If any Contractor and/or CCAC contends that any Union or its member(s) has violated this Article, it will notify in writing the International President(s) of the Union(s) involved, advising him of the fact, with copies of such notice to the Local Union(s) involved, and the BCTC. The International President or Presidents will immediately instruct, order and use the best efforts of his office, including discipline procedures under its Constitution and By-laws, to cause the Local Union(s) or its members to cease any violation of this Article.

Section 4. Expedited Arbitration. Should CCAC, Prime Contractor or any Contractor believe that there has been any violation of this Article, it may institute this expedited arbitration procedure (in addition to any action at law or in equity, or any other contractual procedure available to it). The parties to this Agreement have agreed that the Labor Arbitration Rules of the American Arbitration Association shall apply, including the Rules governing Expedited Arbitration. The Arbitrator shall hold a hearing within twenty-four (24) hours of verbal or written notice of a claimed violation of this Article and shall complete the hearing in one session. The sole issue at the hearing shall be whether or not a violation of this article has occurred. The Arbitrator shall have no authority to consider any matter in justification, explanation, or mitigation of such violation. The arbitral award shall be issued in writing within three (3) hours after the close of the hearing and may be issued without opinion. If any party desires an opinion, the arbitrator shall issue one within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the award.

ARTICLE XI

WAGE AND BENEFITS

Section 1. Classification – Wages. All employees covered by this Agreement shall be classified in accordance with work performed and paid the prevailing wage and benefit rates for these classifications. The Prime Contractors, upon request, shall provide the Unions with substantiation that prevailing wages and benefits are being paid by Contractors on the Project.

Section 2. Payment of Benefits/Contribution. Each Contractor will also pay all required contributions in the amounts required by Section 1 of this Article to the established employee benefit funds that accrue to the direct benefit of the employees (such as pension and annuity, health and welfare, vacation, apprenticeship, training funds). With respect to contributions required in this Section to Employer-Union jointly trusted funds, the Contractor adopts and agrees to be bound by the written terms of the legally established trust agreement specifying the detailed basis on which payments are to be made into, and benefits paid out of, such Trust Funds. The Contractor authorizes the parties to such Trust Funds to appoint Trustees and successor Trustees to administer the Trust Funds and hereby ratifies and accepts the Trustees and successor Trustees to administer the Trust Funds and hereby ratifies and accepts the Trustees so appointed as if made by Contractor. This section does not apply to core employees unless any core employee voluntarily elects to join and become a member of any local union signatory to this Agreement, in which event this Section shall immediately apply with respect to any such core employee.

ARTICLE XII

LOCAL UNION NEGOTIATIONS DURING THE PENDENCY OF THE AGREEMENT

Section 1. All parties to this Agreement understand and acknowledge that some crafts who will be working on the Project are covered by local collective bargaining agreements that will expire prior to the projected completion of the project. All contracting parties understand and agree that irrespective of whether such local collective bargaining agreement negotiations are successful or unsuccessful, there shall be no strike, sympathy strike, jurisdictional strike, recognitional strike slowdown, sabotage, work to rule, sickout, sitdown, picketing of any type (including informational picketing), handbilling, boycott, interruption of work or any disruptive activity that interferes with or interrupts in any way work on the Project by any Union involved in such local negotiations, or by any of its members, nor shall there by any lockout on the Project affecting such union or its members during the course of such negotiations. Irrespective of the status of any such local collective bargaining agreement negotiations, the affected Union and all of its members will observe and fully comply with the provisions of this Agreement.

Section 2. Wage/Benefit Increases. Should a craft covered by this Agreement negotiate an increase in wages or an increase in benefits with any Contractor to become effective during the term of the Project for the area of Western Pennsylvania, those wage and/or benefit increases shall be paid, as of the effective date of those increases, to those employees in that craft performing work covered by this Agreement.

ARTICLE XIII

HOURS OF WORK, OVERTIME, SHIFTS AND HOLIDAYS

Section 1. Work Day and Work Week. Except as provided in Section 4, the first shift shall consist of eight (8) or ten (10) hours per day between the hours of 6:00 a.m. and 5:30 p.m., plus one-half (1/2) hour for unpaid lunch, approximately mid-way through the shift. Forty (40) hours per week shall constitute a regular week's work, whether consisting of five (5) eight (8) hour days, or four (4) ten (10) hour days. The work week will start on Monday and conclude on Sunday. A uniform starting time will be established for all crafts on each project or segment of work. Nothing herein shall be construed as guaranteeing any employee eight (8) or ten (10) hours per day or forty (40) hours per week. The Union(s) shall be informed of the work starting time set by the contractor at the pre-job conference which may be changed thereafter upon three (3) days' notice to the Union(s) and the employees. A second shift, if used, shall consist of eight hours between the 3:00 p.m. and 1:00 a.m.; a third shift, if used, shall begin between 10:00 p.m. and 1:00 a.m. For the purposes of Section 3, the third shift shall be considered as part of the prior day's work.

Section 2. Starting Times. Employees shall be at their place of work at the starting time and shall remain at their place of work (as designated by the Contractor) performing their assigned functions until quitting time, which is defined as the scheduled end of the shift. The parties reaffirm their policy of a fair day's work for a fair day's wage. There shall be no pay for time not worked unless

the employee is otherwise engaged at the direction of the Contractor. Due to the magnitude of the project and congestion of the site, staggered starting times may be required. If necessary, these starting times would be between 6 AM and 8 AM. This policy could help reduce the transportation problems at start and completion times.

Section 3. Overtime. Overtime shall be defined as all hours worked in excess of forty (40) hours in a week, or for 8 hour shifts, in excess of 8 hours per day; or for 10 hour shifts, for work in excess of 10 hours per day; such work and work performed on Saturday shall be paid at one and one-half times the straight time rate of pay. However, in scheduled five day/eight hour shift work-weeks, Saturday may be scheduled as a "make-up" day at straight time to make up for a day lost (Monday through Friday) due to inclement weather; in scheduled four day/ten hour shift work weeks, Friday and/or Saturday may be scheduled as a "makeup" day at straight time to make up for a lost day (Monday through Thursday) due to inclement weather. In addition, if a makeup day is scheduled, all employees directed to work on such day will be guaranteed a minimum of four (4) hours work or pay. In any week in which employees on the Project are scheduled on four day/ten hour shifts, an employee whose first day of work on the projects begins on Wednesday, or a later day of the schedule shall be paid, during the first week of his employment only, time and a half for all hours worked in excess of eight in a day for each day he worked during said week. Work on Sundays and Holidays shall be at double time. There will be no restriction on any Contractor's scheduling of overtime or the non-discriminatory designation of employees who will work. The Contractor shall have the right to schedule work so as to minimize overtime. There shall be no pyramiding of overtime pay under any circumstances.

Section 4. Shifts.

(a) Shift work may be performed at the option of the Contractor(s) upon three (3) days' prior notice to the Union and shall continue for a period of not less than five (5) working days. Saturdays and Sundays, if worked, may be used for establishing the five (5) day minimum work shift. If two shifts are worked, each shall consist of eight (8) hours of continuous work exclusive of a one-half (1/2) hour non-paid lunch period for eight (8) hours pay.

(b) The Contractor may establish a work week of four (4) consecutive ten (10) hour work days (exclusive of one-half hour unpaid lunch, approximately midway through the shift) between Monday and Friday.

Section 5. Holidays. Recognized holidays on the Project shall be New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day. Work performed on holidays shall be paid at double the straight time rate of pay. A holiday falling on Sunday shall be observed the following Monday

Section 6. Meal Period. The Contractor will schedule a meal period of not more than one-half hour duration at the work location at approximately the mid-point of the scheduled work shift (4 hours in a five-day work week, 5 hours in a four-day work week), consistent with Section 1; provided, however, that the Contractor may, for efficiency of the operation, establish a schedule which coordinates the meal periods of two or more crafts. If an employee is required to work through his meal period, he shall be compensated for the time worked at the applicable overtime rate and the employee shall, when work permits, eat his lunch "on the fly."

Section 7. No Organized Work Breaks. There will be no organized breaks or other non-working time established during working hours. Individual nonalcoholic beverage containers will be permitted at the employee's work stations.

Section 8. Craft Worker Parking Facilities. Parking facilities or arrangements for employees working on the Project will be established by the Prime Contractors by the time work on the Project commences.

ARTICLE XIV

APPRENTICES AND HELMETS TO HARDHATS

Section 1. Need For. The parties recognize the need to maintain continuing support of programs designed to develop adequate numbers of competent workers in the construction industry. The Contractor(s) will accordingly employ apprentices in their respective crafts to perform work on the Project within the apprentices' capabilities.

Section 2. Ratios. The Union agrees to cooperate with the Contractor in furnishing qualified apprentices as requested. There shall be no restrictions on the utilization of apprentices in performing the work of their craft provided they are properly supervised.

Section 3. The Employers and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The Employers and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the parties.

Section 4. The Unions and Employers agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

ARTICLE XV

DRUG AND ALCOHOL POLICY

Section 1. Policy. All parties understand and agree that a substance abuse program has been established by the Master Builders' Association of Western PA, Inc. (MBA) and/**or the Constructors Association of Western PA (CAWP)**, and will be in force for all work performed under the Agreement. The substance abuse program will prohibit the use, sale, transfer, purchase and/or possession of a controlled substance, alcohol and/or firearms while on the Project's premises and will require testing of employees. The substance abuse program will be incorporated into and made part of the Agreement and implemented for all Contractors and employees working on the Project.

ARTICLE XVI

NON-DISCRIMINATION

Section 1. Policy. It is the continuing policy of the Prime Contractors, the Contractors and the Unions that the provisions of this Agreement shall be applied without discrimination because of age, race, sex, color, religion, creed, national origin or union signatory or membership status. There shall be no discrimination against an employee because of her or his membership in, or activities on behalf of Unions.

ARTICLE XVII

SOLE AND COMPLETE AGREEMENT

Section 1. The parties agree that this Agreement constitutes the sole and complete agreement between them governing the rates of pay and working conditions of the construction employees working on the Project, that it settles all demands and issues on the matters subject to collective bargaining, and that it shall not be modified or supplemented in any way except by written agreement executed by both parties.

ARTICLE XVIII

SEPARABILITY AND SAVINGS CLAUSE

Section 1. Intent of Parties. If any article or section of this Agreement shall be held invalid by law or by a tribunal of competent jurisdiction, or if compliance with or enforcement of any article should be restrained pending a final determination as to its validity, the remainder of this Agreement shall not be affected and shall remain in full force and effect. In the event that any article or section is held invalid, the parties hereto shall, upon the request of the Unions, enter into collective bargaining negotiations for the purpose of arriving at a mutually satisfactory replacement for such article during the period of invalidity or restraint. If the parties hereto cannot agree on a mutually satisfactory replacement, either party shall be permitted to submit its demand to formal arbitration.

Section 2. Force of Agreement. The parties recognize the right of the CCAC to withdraw, at is absolute discretion, the utilization of this Agreement as part of any bid specification should a court of competent jurisdiction issue any order which could result, temporarily or permanently, in delay of the bidding, awarding, and/or construction work on the Project. Notwithstanding such an action by the Prime Contractors, or such court order, the parties agree that the Agreement shall remain in full force and effect on the Project, to the maximum extent legally possible.

This Project Labor Agreement is made as of this 15th day of February, 2011, by and between the Community College of Allegheny County and the Pittsburgh Regional Building and Construction Trades Council, AFL-CIO.

This Agreement replaces, in its entirety, that certain Labor Stabilization Agreement approved by the CCAC and the BCTC dated the 21st day of June, 1993 that covers all construction projects for which the CCAC acts as Owner.

The CCAC and BCTC, intending to be legally bound hereby, and for other good and valuable consideration the receipt and sufficiency of which the parties hereby acknowledged, agree to the above.

Community College Of Allegheny County

By _____
Alex Johnson, PhD.
President

Approved as to Form and Legality:

By _____
Mike Adams, Esquire
Solicitor

Pittsburgh Regional Building and Construction Trades Council, AFL-CIO

By _____
William Brooks
President

By _____
Thomas McIntyre
Secretary/Treasurer

By _____
Richard Stanizzo
Business Manager

TECHNICAL SPECIFICATIONS AND DRAWINGS

Bid 1136 - Building Envelope Restoration

Community College of Allegheny County

Milton Hall
Project No. T24069.RST3
October 2024

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DRAWINGS

SECTION 01102

SUMMARY OF WORK

PART 1 – GENERAL

1.01 LOCATION OF WORK

A. Work to be performed at:

Milton Hall – Community College of Allegheny County
808 Ridge Avenue
Pittsburgh, PA 15212

1.02 WORK SUMMARY

A. This summary presents a general overview and should not be construed as a complete accounting of all work to be performed. Extent of Work is indicated on Drawings and by requirements of each specification Section.

B. Contractor shall be responsible for ensuring that interior finishes, carpeting, furnishings, merchandise and/or equipment in building are adequately protected from debris and water leaks throughout duration of project.

C. Furnish all labor, trades, equipment, materials, incidentals, and supervision to repair and provide a complete weathertight restoration of exterior facility walls. A summary of specified Work is presented in this Section.

D. Base Scope of Work

1. GENERAL REQUIREMENTS

1.1. General Conditions:

1) Provide all permits, staging / wall access, temporary protection, barricading, supervision, temporary facilities, warranties / guarantees, etc. as required to complete work.
2) Provide a written two (2) year contractor's guarantee against defective materials, defective workmanship, and water leakage. Warranty shall cover 100% replacement of completed work as required to maintain building exterior in a sound and weathertight condition.
3) Provide specified manufacturer warranties against defective materials, and against water leakage. Warranties/guarantees shall cover 100% replacement of completed work as required to maintain building exterior in a sound and weathertight condition during warranty period.

1.2. Bonds
1) Scope: Provide all bonds required for project; including;
(a) Performance Bond.
(b) Labor and Material Payment Bond.

1.3. Permits
1) Provide all permits required for project.

2. SITE – Not Applicable

3. CONCRETE

3.1. Concrete Repair – Horizontal
1) Scope: Remove deteriorated and unsound horizontal concrete to prepare surface and install new concrete to restore surface integrity and serviceability.
2) Work scope includes removing unsound materials, preparing substrate surfaces, cleaning/priming exposed steel, and installing repair mortar with aggregate to match existing adjacent finishes.
3) Sound concrete surfaces to locate and mark extent of deterioration.
4) Grind or sawcut repair perimeter 1/2” to 3/4” deep. Edges shall be straight and as rectangular as practical.
5) Concrete surfaces within repair areas shall be excavated to uniform depth. If deep areas occur within repair area, taper edges to blend deep and shallow areas without sharp transition.
6) Reinforcing steel with more than 1/3 exposed perimeter shall be further excavated to provide 3/4” full perimeter clearance. If pack rust is found on bar(s), continue exposing bar(s) until non-corroded bar is found.
7) Sandblast exposed steel and concrete surfaces to remove rust and surface laitance. Apply epoxy-based corrosion inhibitor to reinforcing steel and all steel exposed within repair area.
8) Pre-wet repair surfaces immediately prior to installation of concrete repair material to provide saturated, surface-dry concrete substrate. Maintain wet burlap and plastic sheeting or curing blankets in place for 72 hrs minimum.
9) Reference Details and Section 03930 – Concrete Patching and Restoration for additional information, requirements, and approved materials.

3.2. Concrete Repair – Vertical/Overhead - Partial Depth (2” to 4”):
1) Scope: Full depth removal of deteriorated and unsound vertical and/or overhead concrete to prepare surface and installation of new concrete to restore surface integrity and serviceability at locations indicated on drawings.
2) Work scope includes removing deteriorated and unsound vertical and/or overhead concrete materials, preparing substrate surfaces, cleaning/priming exposed steel, and installing repair mortar with aggregate to match existing adjacent finishes.
3) Sound concrete surfaces to locate and mark extent of deterioration.
4) Grind or sawcut repair perimeter 1/2” to 3/4” deep. Edges shall be straight and as rectangular as practical.
5) Concrete surfaces within repair areas shall be excavated to uniform depth. If deep areas occur within repair area, taper edges to blend deep and shallow areas without sharp transition.

6) Reinforcing steel with more than 1/3 exposed perimeter shall be further excavated to provide 3/4” full perimeter clearance. If pack rust is found on bar(s), continue exposing bar(s) until non-corroded bar is found.
7) Sandblast exposed steel and concrete surfaces to remove rust and surface laitance. Apply epoxy-based corrosion inhibitor to reinforcing steel and all steel exposed within repair area.
8) Pre-wet repair surfaces immediately prior to installation of concrete repair material to provide saturated, surface-dry concrete substrate. Maintain wet burlap and plastic sheeting or curing blankets in place for 72 hrs minimum.
9) Reference Details and Section 03930 – Concrete Patching and Restoration for additional information, requirements, and approved materials.

3.3. Concrete Repair – Full Depth:
1) Scope: Full depth removal of deteriorated and unsound vertical and/or overhead concrete to prepare surface and installation of new concrete to restore surface integrity and serviceability at locations indicated on drawings.
2) Work includes removing unsound materials, preparing substrate surfaces, cleaning/priming exposed steel, forming and installing repair mortar with aggregate to match existing adjacent finishes.
3) Sound concrete surfaces to locate and mark extent of deterioration.
4) Grind or sawcut repair perimeter 1/2” to 3/4” deep along top and bottom surfaces. Edges shall be straight and as rectangular as practical.
5) If full depth areas occur within shallower repair area, taper edges to blend deep and shallow areas without sharp transition.
6) If pack rust is found on bar(s), continue exposing bar(s) until non-corroded bar is found.
7) Sandblast exposed steel and concrete surfaces to remove rust and surface laitance. Apply epoxy-based corrosion inhibitor to reinforcing steel and all steel exposed within repair area.
8) Install formwork to support repair materials and match adjacent concrete. Formwork shall fit tight to surrounding surfaces to minimize repair material leakage.
9) Pre-wet repair surfaces immediately prior to installation of concrete repair material to provide saturated, surface-dry concrete substrate. Maintain wet burlap and plastic sheeting or curing blankets in place for 72 hrs minimum.
10) Reference Details and Section 03930 – Concrete Patching and Restoration for additional information, requirements, and approved materials.

3.4. Concrete Repair – Crack Injection:
1) Scope: Seal leaking concrete cracks using epoxy / urethane / grout injection materials and procedures at locations indicated on drawings**.**
2) Work includes cleaning concrete surface along crack, drilling crack intercept holes and installing injection ports, installing containment seal at crack surface, pressure-injecting epoxy / urethane injection materials, removing injection ports and patching surface, removing surface containment seal, and restoring surface to match adjacent.
3) Grind concrete surface along crack to remove mineral deposits, laitance, paint, or other bond inhibiting materials. Flush crack with water or high-pressure air in accordance with injection material manufacturer recommendation.

4) Drill port holes at 45° to intercept crack at mid-depth of concrete. Injection hole spacing shall not exceed thickness of concrete and shall alternate sides of crack. Install compression fit injection ports at each hole.
5) Apply epoxy gel or approved equivalent to surface of crack to contain injection material. Cure in accordance with manufacturer recommendation for appropriate bond strength.
6) Pressure inject epoxy / urethane crack seal materials using equipment, pressures, and procedures in accordance with manufacturer's guidelines and recommendations.
7) Remove injection ports and surface containment materials and restore to match adjacent surfaces.
8) Reference Details and Section 03930 – Concrete Patching Restoration

4. MASONRY

4.1. Masonry Repointing:
1) Scope: Cut out and repoint damaged and deteriorated mortar joints at wall areas indicated on drawings.
2) Work includes removing any existing sealant over mortar joints that require tuckpointing, cutting existing joints, providing new pointing mortar to restore joints to original [new configuration] as shown on details, and cleaning adjacent masonry surfaces.
3) Locate and mark mortar joints exhibiting excess surface wear, cracking, deterioration and/or damage.
4) Remove existing sealant materials from mortar joints identified for tuckpointing repair.
5) Cut mortar to uniform specified depth using equipment that will not damage adjacent materials.
6) Clean mortar joint surfaces and pre-wet to saturated, surface-dry (SSD) condition.
7) Install replacement mortar in three (3) lifts minimum, 1/4" to 3/8" per lift, compacting each lift.
8) Strike off mortar surface and tool to specified configuration.
9) Following mortar cure, clean mortar and adjacent surfaces of all mortar residue.
10) Reference Details and Section 04900 – Masonry Repair and Restoration for additional information, requirement, and approved materials.

4.2. Unit Replacement (Brick) – Isolated:
1) Scope: Remove and replace existing distressed and deteriorated masonry.
2) Work includes identifying individual masonry units exhibiting cracking or surface deterioration, removing deteriorated masonry units, and installing/tuckpointing new replacement units.
3) Locate and mark individual masonry units exhibiting cracking or surface deterioration.
4) Cut mortar at full perimeter of masonry unit using equipment that will not damage adjacent materials and remove unit. Clean perimeter of mortar residue.
5) Provide full bedding joint mortar and install new masonry unit.
6) Clean mortar joint surfaces and pre-wet to saturated, surface-dry (SSD) condition.

7) Install replacement mortar in three (3) lifts minimum, 1/4” to 3/8” per lift, compacting each lift.
8) Strike off mortar surface and tool to specified configuration.
9) Following mortar cure, clean mortar and adjacent surfaces of all mortar residue.
10) Reference Details and Section 04900 – Masonry Repair and Restoration for additional information, requirement, and approved materials.

4.3. Masonry Reconstruction (Brick) – Limited Area:
1) Scope: Remove and replace limited areas (less than 10 SF) of existing distressed and deteriorated masonry.
2) Work includes identifying limited size areas of masonry units exhibiting cracking or surface deterioration, removing deteriorated masonry units, removal and disposal of masonry debris, cleaning existing brick for re-use and/or providing acceptable color matching replacement units, and re-installing brick masonry with appropriate ties and anchors.
3) Work also includes dust control measures as required and cleaning of adjacent surfaces to remove mortar droppings.
4) Locate and mark areas of masonry units exhibiting cracking or surface deterioration.
5) Cut mortar at full perimeter of masonry unit using equipment that will not damage adjacent materials and remove unit. Clean perimeter of mortar residue.
6) Provide full bedding joint mortar and install new masonry unit.
7) Clean mortar joint surfaces and pre-wet to saturated, surface-dry (SSD) condition.
8) Install replacement mortar in three (3) lifts minimum, 1/4” to 3/8” per lift, compacting each lift.
9) Strike off mortar surface and tool to specified configuration.
10) Following mortar cure, clean mortar and adjacent surfaces of all mortar residue.
11) Reference Section 04900 – Masonry Repair and Restoration for additional information, requirement, and approved materials.
    (a) Masonry area replacement: All areas indicated on drawings.

4.4. Masonry Reconstruction (Brick) – Large Area:
1) Scope: Remove and replace large areas (greater than 10 square feet) of existing distressed and deteriorated masonry.
2) Work includes identifying large areas of masonry units exhibiting cracking or surface deterioration, removing deteriorated masonry units, removal and disposal of masonry debris, cleaning existing brick for re-use and/or providing acceptable color matching replacement units, and re-installing brick masonry with appropriate ties and anchors.
3) Work also includes dust control measures as required and cleaning of adjacent surfaces to remove mortar droppings.
4) Locate and mark areas of masonry units exhibiting cracking or surface deterioration.
5) Cut mortar at full perimeter of masonry unit using equipment that will not damage adjacent materials and remove unit. Clean perimeter of mortar residue.
6) Provide full bedding joint mortar and install new masonry unit.

7) Clean mortar joint surfaces and pre-wet to saturated, surface-dry (SSD) condition.
8) Install replacement mortar in three (3) lifts minimum, 1/4" to 3/8" per lift, compacting each lift.
9) Strike off mortar surface and tool to specified configuration.
10) Following mortar cure, clean mortar and adjacent surfaces of all mortar residue.
11) Reference Section 04900 – Masonry Repair and Restoration for additional information, requirement, and approved materials.

4.5. Clean Exterior Wall Surfaces

1) Scope: Provide thorough restoration cleaning of all exterior wall surfaces. Exterior wall components include:
   (a) Brick masonry
   (b) Concrete
2) Work Scope includes:
   (a) Implement preparatory treatment of stained/discolored surfaces for effective cleaning procedures.
   (b) Remove/clean all surface stains and material build-up, including:
      i. efflorescence
      ii. rust staining
      iii. environmental staining
   (c) Utilize approved cleaning detergents / chemicals and mild abrasive cleaning to remove resistant stains or surface materials.
3) Reference Section 04900 – Masonry Repair and Restoration for additional information, requirements, and approved cleaning products.

5. METALS

5.1. Structural Steel Restoration:

1) Scope: Recondition structural steel components exposed at repair locations indicated on Drawings.
2) Work includes thoroughly cleaning exposed steel to remove rust and/or chipped/failing paint, and reconditioning steel with primer and protective coating.
3) Clean exposed steel to remove rust and/or chipped/failing paint, using steel brush and/or wire wheel.
4) Re-coat exposed steel using specified corrosion resistant coatings.
5) Reference Sections 05900 – Steel Restoration and Cleaning, and 09960 – High Performance Coatings for additional information, requirement, and approved materials.

6. WOOD, PLASTICS, AND COMPOSITES – Not Applicable

7. SEALANTS/ MOISTURE PROTECTION

7.1. Joint Sealant Replacement

1) Scope: Remove all existing and provide new sealant at all exterior joints. Typical joints include; control/expansion joints**,** wall openings/penetrations, louvers, window/door perimeters, building material interfaces, inset masonry, wall-to-sheet metal roof flashings and building interfaces.

2) Work includes saw-cutting masonry joints where required, removing existing sealant/backing materials, cleaning, and properly preparing joints prior to sealant application.
3) Reference Details and Section 07922 – Joint Sealants for Restoration for additional information, requirement, and approved materials.

7.2. Silicone Sealant At Glazing Joints and Perimeters (Windows, Louvers, Doors)
1) Scope: Remove all existing sealant, clean surfaces, and comprehensively seal all exterior glazing, metal-to-metal frame/flashing/gutter joints, and exposed fasteners at exterior window systems with sealant.
2) Note – Do not seal close perimeters of operable sashes. Reference Section 07922 – Joint Sealants for Restoration.
3) Do not seal over any existing weeps in window system or adjacent masonry. Do not seal interface between lintel flashing and masonry above.
4) Reference Details and Section 07922 – Joint Sealants for Restoration for additional information, requirement, and approved materials.

7.3. Fluid Applied Membrane Air Barrier System
1) Scope: Install new fluid applied air and water barrier to surface of restored concrete masonry back up construction. Work includes watertight termination at all perimeter conditions and intersections with adjoining concrete construction.
2) Reference Section 07272 – Fluid Applied Membrane Air Barriers for additional information, requirement, and approved materials.

7.4. Seal Masonry / Stone Surface:
1) Scope: Provide a clear, water repellent sealer to exposed exterior masonry surfaces at indicated locations.
2) Work includes cleaning/preparing masonry / stone surfaces to receive sealer, masking adjacent surfaces that are not to be sealed, and application of silane-based sealer.
3) Work includes implementing treatment and removal of all soil, stained, and discolored surfaces with manufactured cleaning products. Work also includes providing mild abrasive cleaning to remove existing sealant / resin materials at marred surface locations due to previous injection/patching repairs.
4) Prior to sealer application, provide all necessary masking and protection to adjacent surfaces not designated to receive sealer.
5) Reference Section 07190 – Water Repellents for additional information, requirement, and approved materials.

7.5. Sheet Metal Through-Wall Flashing
1) Scope: Provide new sheet metal flashing at conditions shown. Areas include cap flashing between masonry and concrete, drip flashing below concrete joints and through wall flashing at base of reconstructed masonry wall.
2) Reference Details and Section 07625 – Metal Flashing and Trim for additional information, requirement, and approved materials.

8. DOORS AND WINDOWS – Not Applicable

9. FINISHES

9.1. High Performance Coating:
1) Scope: Clean existing exposed steel and metals indicated on drawings and provide high performance protective coating.
2) Work includes cleaning and coating existing metal.
3) Surface preparation shall conform to coating manufacturer recommendations and requirements.
4) Reference Section 09960 – High Performance Coatings for additional information, requirement, and approved materials.

9.2. Elastomeric Coating – Concrete and Stucco:
1) Scope: Clean existing concrete as designated on drawings and provide elastomeric high performance breathable protective coating.
2) Work includes cleaning and coating concrete.
3) Surface preparation shall conform to coating manufacturer recommendations and requirements.
4) Reference Section 09965 – Elastomeric Coatings for additional information, requirement, and approved materials.

9.3. Transite Coating
1) Scope: Clean existing glazed-in transite panels as designated on drawings and provide elastomeric high performance breathable protective coating.
2) Work includes cleaning and coating (encapsulating).
3) Surface preparation shall conform to coating manufacturer recommendations and requirements.
4) Reference Section 09965 – Elastomeric Coatings for additional information, requirement, and approved materials.

PART 2 – PRODUCTS

2.01 NOT USED

PART 3 – EXECUTION

3.01 NOT USED

END OF SECTION 01102

SECTION 02222

SELECTIVE DEMOLITION FOR RESTORATION

PART 1 - GENERAL

1.01 SUMMARY

A. Provide all labor, materials, equipment, and supervision to demolish, haul and dispose of items in accordance with Specifications and Drawings.

B. Work of this Section includes the following:

1. Demolition and removal of designated components to complete the specified Work.
2. Provide shoring prior to / during work as required to maintain structural stability.
3. Demolition and removal of designated building equipment and fixtures.
4. Cutting and alterations for completion of Work.
5. Removing items for reinstallation.
6. Protecting adjacent areas.
7. Disposal of demolished materials.
8. Contain all dust during cutting and grinding of masonry and concrete materials using dust-collection systems, or other approved means.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American National Standards Institute (ANSI):

1. Safety Requirements for Demolition, Document A10.6.

C. Occupational Safety and Health Administration (OSHA):

1. Construction Safety Act, Part 1926.

D. National Fire Protection Agency (NFPA):

1. NFPA 241: Standard for Safeguarding Construction, Alteration, and Demolition Operations.

E. Environmental Protection Agency (EPA) regulations related to construction practices and the scope of work of the project.

1.03 DEFINITIONS

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

B. Remove and Salvage: Detach items from existing construction and save ready for reinstallation.

C. Existing: Existing items of construction that are not to be removed, salvaged, or recycled.

1.04 PERFORMANCE REQUIREMENTS

A. Contractor is responsible for planning and effective implementation of Work, as well as safety to persons and property. This responsibility shall not transfer to Owner, Consultant or governing authorities.

B. Prior to demolition, examine areas and conditions under which Work is to occur and notify Consultant immediately in writing of any conditions detrimental to proper and timely completion of Work.

C. A review of Contractor's means and methods will be performed by Owner for general conformance with requirements of this specification. This review shall not imply agreement by Owner, Consultant or other governing authorities that Contractor's planning is appropriate or reasonable.

D. Review with Owner and Consultant proposed types of equipment to be used during course of project.

E. Provide all necessary precautions to prevent unauthorized personnel from entering job site.

F. Conduct demolition operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

G. Protect adjoining properties, public thoroughfares, sidewalks, and utilities from damage due to this operation.

H. Provide all necessary protection to prevent airborne construction material, debris, dust, fumes, etc. from entering occupied spaces (e.g. adjacent building, air intake).

I. Structural Support Systems: Structure is designed to be self-supporting and stable after it is fully completed. It is Contractor's responsibility to determine erection procedures and sequence, and to ensure safety and stability of structure and its component parts during construction process. This includes, but is not limited to, providing and maintaining temporary bracing, shoring, guys or tie downs and all necessary safety and fire-fighting equipment. Temporary elements shall remain in place until all structural components are in place and completed.

1.05 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during building demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1. Coordinate with Owner, who will establish special procedures for removal and salvage.

1.06 PROJECT CONDITIONS

A. Portions of building immediately adjacent to selective demolition area will be occupied. Conduct selective demolition so that Owner's operations will not be disrupted. Provide not less than 72hours notice to Owner of activities that will affect Owner's operations.

B. Maintain access to existing walkways, exits, corridors and other adjacent occupied or used facilities. Do not close or obstruct walkways, exits, corridors, or other occupied facilities without written permission from authorities having jurisdiction.

C. Hazardous Materials: Hazardous materials are not expected to be encountered in Work.

1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Owner and Consultant.
2. Hazardous materials will be removed by Owner under separate contract.

1.07 SEQUENCING & SCHEDULING

A. Scheduling of work shall be coordinated with Owner. Contractor shall be prepared to modify or revise plan as necessary to accommodate Owner's requirements. Schedule shall include number of days required for each area of work, coordination and sequencing between demolition and replacement, as well as disposal of materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION

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

B. Review Project Record Documents of existing construction as may be provided by Owner. Owner does not certify that existing conditions are same as those indicated in Project Record Documents.

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

D. Any unanticipated conditions not shown on Drawings or indicated in Specifications are to be reported to Consultant in writing.

E. Verify that hazardous materials have been remediated before proceeding with selective demolition operations.

3.02 PREPARATION

A. Existing Electrical and Mechanical Systems: Temporarily disconnect and remove electrical, plumbing, lightning protection, fire protection lines, etc. as required for Work. This work shall be performed by a licensed Contractor for each trade. Store at Owner's designated location for later re-installation. Upon re-installation, test systems for proper operation.

B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement, settlement, or collapse of construction being selectively demolished. Strengthen or add new supports as required, or as directed by Consultant, during progress of selective demolition.

1. Masonry Openings:
   a. Up to than 24 inches in height: Provide continuous horizontal members to support brick masonry remaining above opening. Horizontal members shall be rigid enough to support masonry without deflection between vertical members. Provide vertical members of sufficient strength at 24 inches on center maximum spacing.
   b. Greater than 24 inches in height: Support to be designed by a professional engineer paid by Contractor and approved by Consultant. Do not proceed with work without review and approval from Consultant.
   c. Contractor shall repair cracked masonry due to inadequate / improper support at no cost to Owner.

C. Temporary Enclosures: Erect and maintain weatherproof, smoke tight and dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise. Use fireproof materials for all temporary enclosures.

D. Temporary Protection: Contractor is responsible for protection and safety in work area.

1. Protect Work at all times, and protect all adjacent work, materials, landscaping and pavements, by suitable covering or other methods during progress of Work.
2. Erect, and maintain temporary protection, such as walks, fences, railings, canopies, and covered passageways, including warning signs and lights, where indicated and required by authorities having jurisdiction.

3. Maintain exits at all times from the building(s). Erect protective scaffolding over entrances/exits as required, with a minimum clear height of 6 feet 8 inches.

E. Where traffic and/or equipment are required over any roofing/waterproofing and concrete paving materials, Contractor shall provide following layers of protection:

1. Minimum one inch insulation board directly on roof/waterproofing surface.
2. Minimum 3/4-inch plywood traffic surface.
3. Secure protection layers against blow-off or other related damage.
4. Protection shall extend at least 8 feet from the wall / parapet in work areas, and all other areas that may be damaged by construction activities (such as access paths to work

3.03 DEBRIS CONTROL

A. At all times, prevent debris and materials from exiting staging equipment and falling to ground or lower roof levels.

B. Provide netting at interior side of staging basket to contain.

C. Position staging equipment so that work is conducted between waist and chest height to allow for better control of materials. Overhead work shall not be permitted.

D. Adhere to Owners safety policy at all times, including personal protection equipment and protection of surrounding persons / property.

3.04 DUST CONTAINMENT

A. Temporary Enclosures: Erect and maintain weatherproof, smoke tight and dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise. Use fireproof materials for all temporary enclosures.

B. Contractor shall contain all dust during saw-cutting of masonry and concrete, and any other materials.

C. Use dust-free saw-cutting equipment with integrated vacuum systems. Change filters frequently to prevent dust from escaping.

D. Wet cutting may be considered by Owner but must be approved in advance for each location. If wet cutting is used, pre-wet area to be cut and entire wall area below. After cutting, thoroughly wash down entire wall area below to remove all mortar and debris.

3.05 DEMOLITION

A. Coordinate and execute all demolition to ensure that all reconstruction work can be completed once it is begun.

B. Demolish and remove existing construction only to extent required by new construction or as otherwise indicated. Use methods required to complete selective demolition within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically. Conduct work in an order that avoids transporting removed items and debris through areas of completed Work.
2. Neatly cut openings and holes square and true to dimensions required. Use cutting methods least likely to damage adjoining construction. Whenever possible, use hand tools or small power tools designed for sawing or grinding, to minimize disturbance of adjacent surfaces.
3. Temporarily cover openings at the end of each workday.
4. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
5. Do not use cutting torches until work area is cleared of flammable materials, as approved by Owner. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations and maintain adequate ventilation when using cutting torches.

C. Remove and salvage existing items specified or indicated on Drawings.

D. Remove debris from elevated portions by chute, hoist, or other device that will convey debris to grade level in a controlled descent. All debris must be directly placed into trash receptacles at elevation work is being performed, and later transported to ground elevation under safe controlled conditions.

E. Close and seal all heating and ventilation ducts as required to prevent contamination and intake of fumes inside building. Where ducts cannot be closed, as determined by Owner, provide filtering media for duct and fumes.

F. Protect all glass and metal surfaces in area of Work.

G. Protection of Salvaged Items: Pack or crate designated salvaged materials and equipment after removal. Identify contents of containers. Protect items from damage during transport and storage.

H. Existing Items to Remain: Protect construction items to remain in place against damage and soiling during selective demolition. When permitted by Owner, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

I. Except for items or materials indicated to be salvaged, reinstalled or otherwise indicated to remain Owners property, demolished materials will become Contractor’s responsibility and will be removed from Owner’s property.

3.06 REPAIRS

A. General: Promptly repair damage to adjacent construction caused by demolition operations. Provide required repairs due to inadequate protection methods at no cost to Owner.

B. Where repairs to existing surfaces are required, provide materials and procedures to match existing construction.

C. Restore exposed finishes of repaired areas and extend restoration into adjoining construction in a manner that eliminates evidence of remedial and refinishing procedures.

3.07 ADJUSTING AND CLEANING

A. At end of each work period, Contractor shall remove from premises all rubbish and accumulated materials of any nature not caused by others and shall leave his part of Work in a clean, orderly and acceptable condition.

B. Disposal of debris shall be the responsibility of Contractor.

END OF SECTION 02222

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SECTION 03930

CONCRETE PATCHING AND RESTORATION

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment, and incidentals required for repair and restoration of damaged, deteriorated, or previously patched concrete areas.

B. Work of this Section includes:

1. Removal of deteriorated concrete areas to provide a suitable substrate for following surface orientations:
   a. Horizontal repairs.
   b. Overhead repairs.
   c. Vertical repairs.

2. Prepare and patch areas of deteriorated concrete.
3. Repair of existing embedded steel reinforcing components.
4. Preparation and coating of existing embedded steel reinforcing components.
5. Crack injection, including removal of all surface sealants and injection ports, and patching injection ports when injection is complete.

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound.

D. UNIT PRICE – MEASUREMENT AND PAYMENT

E. Concrete Removal and Patching or Rebuilding:

1. Basis of Measurement: By square foot, computed on basis of rectangular solid shapes approximating actual shape of concrete removed and replaced with average depths, widths, and lengths, measured to nearest inch.
2. Basis of Payment: Includes removals, surface preparation, treating existing reinforcement, concrete repair, and finishing.
3. Payment will be based on orientation of repairs.

F. Crack Injection:

1. Basis of measurement: By linear foot of crack injected.
2. Basis of Payment: Includes surface preparation, injection ports, repair materials, and surface finishing.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM):

1. ASTM A 82: Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
2. ASTM A 615: Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
3. ASTM A 996: Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete reinforcement.
4. ASTM C 33: Specification for Concrete Aggregates.
5. ASTM C 109: Standard Test Method for Compressive strength of Hydraulic Cement Mortars (Using 2-inch or (50 mm) Cube Specimens).
6. ASTM C 150: Specification for Portland Cement.
7. ASTM C 260: Air Entraining Admixtures for Concrete.
8. ASTM C 293: Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading).
9. ASTM C 404: Standard Specification for Aggregates for Masonry Grout.
10. ASTM C 882: Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete By Slant Shear.
11. ASTM C 1042: Standard Test Method for Bond Strength of Latex Systems Used With Concrete By Slant Shear.
12. ASTM C 387: Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete.

C. Concrete Reinforcing Steel Institute (CRSI):

1. Manual of Standard Practice.

D. American Welding Society (AWS):

1. AWS D 1.4: Structural Welding Code – Reinforcing Steel

E. American Concrete Institute (ACI):

1. ACI 301: ACI Specification for Structural Concrete of Buildings.
2. ACI 318: Building Code Requirements for Structural Concrete.

F. The Society for Protective Coatings (SSPC):

1. SSPC: Steel Structures Painting Manual.

1.03 DELIVERY, STORAGE AND HANDLING

A. Coordinate locations for on-site staging and storage areas with Owner.

B. Deliver and neatly store materials on job site in a manner that prevents damage, contamination or breakage and with packages intact displaying labels identifying manufacturer, product name, and lot numbers when appropriate.

C. Store materials in accordance with manufacturer's recommendations.

1.04 PROJECT CONDITIONS

A. Protect elements surrounding work of this Section from damage or disfiguration.

1.05 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are primary products and materials for specified repair work. Provide all incidental items and materials required for completion of Work in accordance with these documents.

2.02 CONVENTIONAL CONCRETE

A. Concrete

1. Portland Cement: ASTM C 150, Type I.
2. Aggregate:
   a. Fine Aggregate: Uniformly graded, natural silica sand in accordance with ASTM C33. Sand shall be free of loam, clay, or other deleterious substances.
   b. Coarse Aggregate: Gravel, crushed gravel, or crushed stone, normal weight, conforming to requirements of ASTM C33. Class designation Class 5S, size 57 (3/4 inch nominal size aggregate maximum).

3. Admixtures: All admixtures must be approved in writing by Consultant prior to use. Manufacturer(s) approval for use of all admixtures in combination must be submitted to Consultant prior to use.
   a. Air entraining admixture ASTM C260, certified by manufacturer to be compatible with other admixtures in mix design.
   b. Normal or high range water-reducing admixture ASTM C494, Type A, F or G, and containing not more than 0.1% chloride ions.
   c. Corrosion Inhibitor shall be used in paving slabs. Corrosion Inhibitor shall be Calcium Nitrite-Based Corrosion Inhibitor (CAN), ASTM C494 Type C:
      1) DCI or DCI-S Corrosion Inhibitor, by Grace Construction Products. Use at a rate of 2.0 gal/cu yd.

2) EUCON BCN, by Euclid Chemical Company.

d. Membrane curing compound, calcium chloride, and any other admixture shall not be used on any concrete against which additional concrete or other material is to be bonded.

2.03 SPECIALTY CONCRETE

A. Materials

1. Horizontal Repairs:
   a. Sikatop 123 Plus by Sika Corporation.
   b. Conpro Set by Conproco.
   c. SikaEmaco 1061 by Sika Corporation.

2. Overhead and Vertical Repairs:
   a. Sikatop 123 Plus by Sika Corporation.
   b. Conpro Set by Conproco.
   c. SikaEmaco 425 Gel Patch by Sika Corporation.

3. Form-and-Pour Repairs (Vertical):
   a. SikaEmaco 425 Gel Patch by Sika Corporation.
   b. Sikacrete 211 SCC Plus by Sika Corporation.

2.04 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A 615, Grade 60ksi yield grade billet-steel deformed bars, epoxy coated in accordance with ASTM A 884 finish. Size to match existing.

B. Welded Steel Wire Fabric: Conform to ASTM A 185, smooth, in flat sheets, [with galvanized coating]. Provide 10-gauge wire in both directions at a spacing of 6 inches by 6 inches.

C. Tie Wire: #16-gauge tie wire.

D. Coating for Cut Bars:

1. Tnemec-Zinc 90G-1K97 by Tnemec Co., Inc.
2. H.S. Epoxy Series 104 by Tnemec Co., Inc.
3. Approved equal.

2.05 CRACK INJECTION

A. Mineral Based Grout:

1. Jahn Injection Grouts distributed by Catherdral Stone Products
   a. Concrete: Jahn M31 Micro Injection Adhesive (for hairline cracks up to 3/16" or 5.0mm in width).

b. Brick/Limestone: Jahn M32 Micro Injection Adhesive (for hairline cracks up to 3/16" or 5.0mm in width).
c. Concrete/Masonry: Jahn M35 Crack and Void Injection Grout (for cracks approximately 3/16" to 3/8" or 5.0mm to 10.0mm in width)

B. Epoxy Injection Materials:

1. Eucopoxy Injection Resin by Euclid Chemical Co.
2. SikaDur 52 by Sika Corporation.

2.06 CONVENTIONAL CONCRETE AND REPAIR MORTAR MIXES

A. Mix products in clean containers according to manufacturer's written instructions.

1. Add clean silica sand and coarse aggregates to products only as recommended by manufacturer.
2. Do not add water, thinners, or additives unless recommended by manufacturer.
3. When practical, use manufacturer™™s pre-measured packages to ensure that materials are mixed in proper proportions. When pre-measured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovel or trowel as unit or measure.
4. Do not mix more materials than can be used within recommended open time. Do not re-temper mixes that have begun to set-up, set materials shall be discarded.

B. Conventional Concrete:

1. Strength, minimum cement factor, and other requirements:

Design compressive strength, f'c (psi):	5,000
Slump Range (Inch)	3-½ inch. maximum ± 1/2 inch

2. Concrete at point of placement shall be air entrained with a total entrained air content of 6%, with a tolerance of -1%, +2%. Adjust mix design to account for air loss in transit and placing. Air content is a minimum value for hardened concrete. Hardened, air-entrained concrete shall have a maximum air void spacing factor of 0.008 inch, and a minimum specific surface of 600 square inch/cubic inch of air void volume.
3. Proportion all concrete in accordance with Section 3.9, ACI 301. If intent is to submit substantiating data as specified in Section 3.9.1.1 or Section 3.9.1.2 ACI 301 data must be submitted 45 days prior to concrete placement, otherwise 3.9.1.2 proportions will be established in accordance with Section 3.9.3.3.

C. Conventional Dry-Pack Mortar for Overhead Repair: By weight, 1 part cement, 2-1/2 parts sand, and enough water to produce a mortar of earth-dry consistency (or a damp cohesive mixture that can be squeezed by hand into a ball but is not plastic).

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine existing conditions in area of work and verify that no conditions are present that prevent or otherwise interfere with specified Work.

B. For horizontal repairs, after all existing overburden has been removed, Contractor is responsible for visually inspecting and sounding entire surface of slabs, including chain dragging entire surface as required to discover and repair all delaminated and/or spalled concrete.

3.02 PREPARATION

A. Provide proper protection to people, motor vehicles, equipment, surrounding construction, project site, plants, and surrounding buildings from injury resulting from concrete restoration work.

1. Coordinate temporary closure of entrances and parking areas with Owner. Erect temporary protective covers over pedestrian walkways and at points of entrance and exit for people and vehicles that must remain in operation during course of concrete rehabilitation work.
2. Provide full height dust barriers and protection around all areas during concrete removals and surface preparation, as required. Temporarily cover or protect ducts, vents, and windows on building exterior. Coordinate shutdown of such ducts/vents and closure of operable windows with Owner. Maintain all barriers and protection until work in that area is completed.

B. Shoring: Install temporary supports before beginning concrete removal.

3.03 DEMOLITION AND SURFACE PREPARATION FOR CONCRETE AND MORTAR REPAIRS

A. Saw-cut perimeter of area of repair area to a depth of at least 3/4 inch. Make cuts perpendicular to concrete surfaces and no deeper than cover on reinforcing. Saw cuts shall form polygons, in plan, which have at least 90-degree corners and enclosed damaged area.

B. Where reinforcing bars are present, remove concrete to a minimum depth of 3/4 inch beyond outmost layer of reinforcement. Remove concrete to such additional breadth and depth as required to expose un-corroded reinforcing bars and a surface of sound uncontaminated concrete. Sound concrete need not to be removed beyond subsequent layers of reinforcement unless either more than 1/2 perimeter of bar is exposed or bond between bar and concrete is destroyed. Conduct concrete removal in a manner to prevent cutting, nicking, bending, or otherwise damaging reinforcement. Repair or replace accidentally damaged reinforcement at no cost to Owner.

C. Remove loose and deteriorated concrete from area to be repaired. Roughen concrete surface to receive patching material to a minimum amplitude of 1/4 inch. Remove all loose particles and deleterious materials from exposed sound concrete and exposed reinforcing bars by sandblasting. Clean reinforcing bars to SSPC SP-3 commercial blast finish, or better.

D. Steel Reinforcement:

1. Where section loss of reinforcing bar is more than 15 percent, report findings to Consultant for strength evaluation prior to commencing with Work.
2. Where necessary, cut out and remove corroded bars as directed by Consultant. Remove additional concrete as necessary to provide at least 3/4-inch clearance at existing and replacement bars. Splice replacement bars to existing bars with a minimum lap of 40 bar diameters.
3. Coat all exposed existing reinforcing bars with protective coating in accordance with manufacturer's written instructions.

3.04 FORMWORK – OVERHEAD AND WALL REPAIRS

A. Provide two-sided impermeable forms securely fastened to existing concrete sufficiently to allow proper compaction of mortar into repair area. Forms for ribs shall comprise a bottom form and side form.

3.05 SURFACE PREPARATION AT PLACEMENT

A. Remove all dust and debris from previously prepared surfaces of sound concrete by sweeping and blowing with oil-free compressed air.

B. Conventional Concrete and Mortar: After the surface has been cleaned, and at least one hour before placing concrete, pre-wet bonding surface with a uniform spray application of water, puddles shall be blown clean. Surface shall be maintained in a saturated surface dry (SSD) condition. Immediately before placing concrete, a thick coating of bonding slurry shall be scrubbed into dry, prepared surface. Care shall be taken to ensure that all surfaces receive a thorough, even coating and that no excess slurry is permitted to collect in pockets. Rate of progress in applying slurry shall be limited so that slurry does not become dry before it is covered with fresh concrete.

C. Specialty Concrete: Follow manufacturer's written instructions for pre-wetting bonding surface (if required) and bonding agent application.

3.06 APPLICATION CONVENTIONAL CONCRETE (HORIZONTAL)

A. Concrete shall be mixed and placed in accordance with ACI guidelines and specifications, including Sections 1 through 5 of ACI 301, except as modified herein.

B. Concrete placement shall be in accordance with approved shop drawings and schedule and shall be continuous within approved expansion joint or cold joint locations.

C. Concrete placement will not be permitted when weather conditions prevent proper placement and consolidation, or when concrete that has attained its initial set, or if concrete is more than 90 minutes old.

D. Deposit concrete in forms as near as practical in its final position. Prevent splashing of forms or reinforcement with concrete in advance of placing concrete.

E. Do not allow concrete to drop freely.

F. All concrete shall be spread and vibrated internally. Ensure that all reinforcing bars are completely encapsulated by fresh concrete.

3.07 APPLICATION - CONVENTIONAL MORTAR (OVERHEAD / WALL)

A. Hand tamp mortar into place in layers no more than 3/4-inch thick, using wood tamping tools. Carefully tamper mortar to completely fill repair area and preclude voids.

B. Strike off mortar slightly above surface of surrounding concrete, and finish to resemble texture of surrounding concrete as closely as possible.

3.08 CONCRETE CURING

A. Cure concrete in accordance with recommendations of ACI Manual for Concrete Practice using only moist curing procedures specified in ACI 308. Submit proposed curing procedures to Consultant for approval prior to use.

B. Keep concrete moist for at least 7 days. Cover with wet burlap and polyethylene well drained and maintained in a damp condition continuously. Fog spray concrete during curing period as frequently as drying conditions may require.

C. During curing period, maintain concrete above 70°F for at least 3 days or above 50°F for at least 5 days.

D. Protect concrete against rapid drying and damage by rain and/or frost. The appearance of plastic shrinkage cracks may be cause for rejection of concrete.

E. Protect all concrete work against damage and defacement during subsequent construction operations until final acceptance and full cure.

F. For patching and filling, comply with ACI 308, Chapter 5 and, if pre-mixed repair materials are used, material manufacturer recommendations.

3.09 CRACK INJECTION: Comply with manufacturer’s written instructions, except as modified below:

A. Clean areas to receive capping adhesive of oil, dirt, and other substances that would interfere with bond, and clean cracks with oil-free compressed air or low-pressure water to remove loose particles.

B. Place injection ports as recommended by material manufacturer, spacing no farther apart than thickness of member being injected. Drill holes on angle so as to intersect center of crack at center of wall. Holes shall be 1/2 inch to 1 inch in diameter, staggered on opposite sides of crack. Seal injection ports in place with capping adhesive.
C. Clean drill holes and injector ports of dust and debris by blowing out with oil-free compressed air and then flush with water from port to port.
D. Inject crack with approved material, beginning at widest part of crack and working toward narrower parts. Inject adhesive into ports to refusal, capping adjacent ports when they extrude epoxy. Cap injected ports and inject through adjacent ports until crack is filled. Inject crack until all of following are fulfilled:
   a. Grout enters crack or joint.
   b. Observable loss of grout returning from crack is estimated to be less than 25% of volume of grout being pumped.
   c. Grout injected reaches next entry port.
   d. Grout has not extended for more than 5 ft along crack or joint away from grout hole.

E. After grout has set, remove injection ports and grind surfaces smooth.

3.10 FIELD QUALITY CONTROL

A. Technical Support

1. Contractor shall arrange with concrete repair material manufacturer or distributor to have services of a competent field representative at work site prior to any mixing of components to instruct work crews in proper mixing and application procedures. They shall remain at job site after work commences and continue to instruct until they, Contractor, and Owner are satisfied that crew has mastered technique of installing system successfully.
   a. Manufacturer's field representative must be fully qualified to perform work and shall be subject to approval of Owner.

2. Contractor shall be completely responsible for expense of services of required manufacturer's field representative and contract price shall include full compensation for all costs in connection therewith.

B. Contractor shall make provision to assist and coordinate monitoring of work by Owner and Consultant.

3.11 ADJUSTING AND CLEANING

A. Clean all exterior wall surfaces to remove dirt, stains, and marred surfaces from previous repairs and completed work activities. Final cleaning shall conform to previously approved test samples.

B. Remove all unused materials, residue, containers, and waste in accordance with environmental regulations.

C. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of work of this Section.

D. Repair, restore, or replace all materials, landscaping, interior finishes, and damages surfaces to satisfaction of Owner at no additional expense.

E. Provide daily cleaning of exterior wall and window surfaces.

END OF SECTION 03930

SECTION 04900

MASONRY REPAIR AND RESTORATION

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment, and incidentals required to perform repair and restoration work at exterior masonry walls.

B. Work for this Section includes following:

1. Removal and replacement of deteriorated masonry units.
2. Repointing of damaged/deficient mortar joints.
3. Removal and installation of masonry for provision of through-wall flashings and restoration of embedded steel components.
4. Removal and replacement of areas of distressed masonry.
5. Provide masonry restoration anchors to secure masonry to back-up structure.
6. Saw-cut existing expansion joints in masonry wall system to widen joint for sealant installation.
7. Restoration cleaning of wall surfaces.
8. Restoration sealer application.

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound and weathertight.

1.02 UNIT PRICE – MEASUREMENT AND PAYMENT

A. Brick Removal and Replacement:

1. Basis of Measurement: By individual unit and/or square foot (as indicated on Bid Form and Summary of Work), computed based on rectangular solid shapes approximating actual shape of brick removed and replaced, measured to nearest foot.
2. Basis of Payment: Includes removals, preparation, replacement anchors, replacement masonry materials and cleaning.

B. Repointing:

1. Basis of measurement: By linear foot of tuckpointing.
2. Basis of Payment: Includes saw-cutting / removal of existing mortar, surface preparation, repair materials, and cleaning.

1.03 REFERENCES

A. All standards referenced are latest editions, unless otherwise indicated.

B. Building Code Requirements for Masonry Structures: ACI 530/ASCE 5/TMS 402

C. Specifications for Masonry Structures: ACI 530.1/ASCE 6/TMS 602

D. American Society for Testing and Materials (ASTM)

1. ASTM A 153: Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.
2. ASTM A 525: Steel Sheet, Zinc Coated, (Galvanized) by the Hot-Dip Process.
3. ASTM C 62: Specification for Building Brick (Solid Masonry Units Made from Clay or Shale).
4. ASTM C 67: Methods for Sampling and Testing Brick and Structural Clay Tile.
5. ASTM C 90: Load Bearing Concrete Masonry Units.
6. ASTM C144: Aggregate for Masonry Mortar.
7. ASTM C 150: Specification for Portland Cement.
8. ASTM C 207: Specification for Hydrated Lime for Masonry Purposes.
9. ASTM C 216: Specification for Facing Brick (Solid Masonry Units Made From Clay or Shale).
10. ASTM C 270: Specification for Mortar for Unit Masonry.
11. ASTM C 387: Packaged, Dry, Combined materials, for Mortar and Concrete.
12. ASTM C 404: Aggregates for Masonry Grout.
13. ASTM C 476: Grout for Masonry.
14. ASTM C 1019: Method of Sampling and Testing Grout.
15. ASTM C 1072: Method for Measurement of Masonry Flexural Bond Strength.
16. ASTM C 1142: Ready-Mixed Mortar for Unit Masonry.
17. ASTM E 447: Test Methods for Compressive Strength of Masonry Prisms.
18. ASTM E 518: Test Method for Flexural Bond Strength of Masonry.

E. The Brick Industry Association (BIA): Technical Notes.

F. Indiana Limestone Institute of America Handbook

1.04 DELIVERY, STORAGE AND HANDLING

A. Coordinate locations for on-site staging and storage areas with Owner.

B. Package and neatly store materials in a manner that prevents surface damage or contamination, distortion, breakage or structural weakening. Replace any damaged materials.

1.05 PROJECT CONDITIONS

A. Protect elements surrounding Work from damage or disfiguration.

B. Immediately remove stains, efflorescence, or other excess resulting from Work.

C. Be prepared to immediately protect incomplete installations from damage by inclement weather.

D. Provide protection at open wall conditions due to delays in fabrication, shipment, and installation of specified Work.

1.06 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are primary products and materials for specified restoration work. Provide all incidental items and materials required for completion of Work in accordance with these documents.

2.02 MORTAR

A. Portland Cement: ASTM C 150, Type I or IA, white or natural color, low alkali (equivalent alkalis less than 0.6 percent). Only one brand and type of Portland cement shall be used for Work unless prior written approval is obtained from Consultant. Brands are subject to approval from Consultant based on mortar color desired and obtainable by uses of various brands readily available. Where white cement or nonstaining cement is required, cement shall have not over 0.03 percent water soluble alkali in accordance with ASTM C 114.

B. Hydrated Lime: ASTM C 207, Type S.

C. Mortar Aggregate: ASTM C 144 aggregate to match color and texture in original mortar, with no more than 50 parts per million chloride ions and free of organic contaminants. For joints narrower than 1/4 inch, use aggregate graded with 100 percent passing No. 8 sieve and 95 percent passing No. 16 sieve.

D. Water: Clean, potable, and free from deleterious acids, alkalis or organic materials.

E. Admixtures:

1. Admixtures such as air-entraining agents, accelerators, retardants, water repellent agents, antifreeze compounds, and other admixtures shall not be added to mortar unless specified.
2. Do not use admixtures containing more than 0.2% chloride ions.

3. Mortar Pigments: Mortar pigments shall only be used when an acceptable mortar cannot be obtained by altering mix proportions and / or material types (such as different color sand and cement). Do not use pigments without written direction from Consultant. Pigments shall conform to ASTM C 270 and C 979. Integral coloring material shall consist of inert, non-fading, finely ground, alkali-fast mineral oxides, made specifically for cement/lime mortars. Limit coloring additive not to exceed 10% of weight of Portland cement. Do not use carbon black as a coloring additive.

F. Mortar Mixes:

1. Mortar for Brick and Stone: ASTM C 270, Type N using Proportion Specification.
2. Repointing: ASTM C 270, Type N using Proportion Specification.

2.03 GROUT

A. Grout Mixes:

1. Proportion and mix grout in accordance with requirements of ASTM C 476 grout.
2. Unless otherwise specified, mix grout to a consistency that has a slump between 8 and 11 inches.
3. Mix all cementitious materials and aggregates for a minimum of 5 minutes in a mechanical batch mixer with sufficient water to achieve specified slump.

B. Mix Tests:

1. Testing of Grout Mix: In accordance with ASTM C 1019.

2.04 MASONRY UNITS

A. Face Brick (Solid Masonry Units Made from Clay or Shale):

B. ASTM C 216, Grade SW, Type FBS, unless otherwise indicated.

C. Size, Texture and Color: To match adjacent, existing masonry units as approved by owner.

D. Properties:

1. Initial Rate of Absorption: 6 to 15 grams of water per minute per 30 square inches.
2. Efflorescence: Perform as described in ASTM C 67. Units shall have a rating of Not Effloresced.

E. Use: Provide as needed for replacement of existing damaged units.

F. Provide special units for corners and other similar exposed applications.

G. Hollow Brick (Hollow Masonry Units Made from Clay or Shale):

1. ASTM C 652, Grade SW, Type HBS, unless otherwise indicated.
2. Size, Texture and Color: To match adjacent, existing masonry units. Provide samples for Owner approval.
3. Properties:
   a. Initial Rate of Absorption: 6 to 15 grams of water per minute per 30 square inches.
   b. Efflorescence: Perform as described in ASTM C 67. Units shall have a rating of Not Effloresced.
4. Use: Provide as needed for replacement of existing damaged units.
5. Provide special units for corners and other similar exposed applications.

2.05 REINFORCEMENT AND ANCHORAGE

A. All screws, bolts, nuts, washers, rivets, ties, and pins shall be hot-dipped galvanized steel (ASTM A 153, Class B), or Type 304 stainless steel.

B. Wall Ties: Adjusted wall tie, with formed steel wire, minimum 3/16-inch diameter hot dip galvanized to ASTM A 153 B2 steel finish. Length as required to provide minimum 2-inch embedment in bed joint of outer masonry, and minimum 1/2-inch mortar cover.

2.06 RESTORATION ANCHORS

A. Type: Self-tapping, dry set, helical, 304 stainless steel, remedial wall tie. Provide 8 mm. diameter anchors with minimum length as follows:

   1. Concrete back up – 10-8mm step-down; field verify length
   2. Masonry back up - 10mm; field verify length.
   3. Lengths are subject to manufacturer's load testing of first installation.

B. Acceptable Manufacturer / Product:

   1. BLOK-LOK Limited, Toronto, Ontario, Canada / Spira-Lok Wall Ties.
   2. Helifix North America Corp., Concord, Ontario, Canada / DryFix Wall Ties.

C. Pull-Out Load: Minimum 350 lbs.

2.07 ACCESSORIES

A. Preformed Control Joints: Neoprene material. Provide with corner and tee accessories, heat fused joints.

B. Joint Filler: Closed cell polyethylene; oversized 50% to joint width; self-expanding; 1-inch wide x maximum lengths.

C. Weeps:

1. Type: Preformed rectangular, plastic with stainless steel screen or intermediate honeycomb design.
2. Size: minimum 1-1/2 inches in height, maximum height 1 head joint.
3. Color: As selected by Owner.
4. Acceptable Products:
   a. #342 Series Rectangular Plastic Weep Holes by Hohmann & Bernard, Inc.
   b. Quadro-Vent by Hohmann & Bernard, Inc.
   c. Approved equivalent.

2.08 CLEANING MATERIALS

A. Chemical Cleaning Agent: Mix agents according to manufacturer specifications.

B. Acceptable Products:

1. Prosoco Corp. / Enviro Klean EK Restoration Cleaner
   a. Primary Use: Provide as initial cleaner for stains at masonry [limestone].

2. Prosoco Corp. / Sure Klean 600
   a. Primary Use: Provide as an initial cleaner at previous mortar and brick replacement area.

3. Prosoco Corp. / 2010 All Surface Cleaner
   a. Primary Use: Provide as general cleaner for all exterior building surfaces.

PART 3 - EXECUTION

3.01 GENERAL

A. Examine each area of work and verify that existing conditions are acceptable for specified installation procedures. Report, in writing, adverse conditions that could affect performance of Work within five calendar days. Absence of written notification will indicate Contractor's acceptance of existing project conditions.

B. Measurements: Before ordering materials or performing work, obtain and verify all measurements at building site. Exact measurements are Contractor’s responsibility.

C. Masonry workmanship shall comply with all applicable recommendations of Brick Industry Association (BIA, formerly Brick Institute of America), Indiana Limestone Institute of America, and Masonry Structures ACI 530.1, except as modified below. Report any damage to new or existing flashings within work area to consultant, and provide for repairs by appropriately skilled tradesmen, at no cost to Owner.

D. Hot weather (above 90°F): Do not use mortar when masonry surface temperature is above 90°F. Protect masonry and mortar (mixed and individual components) from direct sunlight and exposure to wind, to avoid rapid evaporation of water in mortar before, during, and after masonry construction. Mixed mortar must remain below 120°F. When temperature is above 100°F or 90°F with winds, mist newly constructed masonry until damp, at least three (3) times a day, for at least three (3) days.

E. Cold Weather (below 40°F): Do not work in average daily temperatures below 40°F without providing cold weather protection as described in ACI 530 and outlined in table below. Continue to operate heaters overnight with appropriate supervision. Do not use heaters that produce oily deposits on masonry. If any oily deposits occur, consult with Engineer to determine how best to remove oily deposits, and remove at Contractor's expense.

Temp.	WORK IN PROGRESS			COMPLETED WORK
	Brick	Mortar	Assemblage	Assemblage
Above 40°F	No Requirements.	No Requirements.	No Requirements.	No Requirements.
40°F to 25°F	Remove visible ice.	Heat during mixing to between 40°F and 120°F. Maintain above freezing while in use.	No Requirements.	Protect masonry with a weather-resistive cover for 24 hours after construction. Completely cover masonry when temp. is less than 32°F.
25°F to 20°F	Remove visible ice.	Heat during mixing to between 40°F and 120°F. Maintain above freezing while in use.	Use heat sources on both sides of wall. Install wind breaks when velocity is over 15 mph.	Completely cover with insulated blanket for 24 hours after construction.
Below 20°F	Heat to above 20°F; remove visible ice.	Heat during mixing to between 40°F and 120°F. Maintain above freezing while in use.	Provide an enclosure and use heat sources to maintain temp. above 32°F within enclosure.	Provide an enclosure and use heat sources to maintain temp. above 32°F within enclosure.

F. Conduct all masonry work in a neat and workmanlike manner, to prevent staining any surface with mortar or other spills. Avoid dropping mortar on completed masonry work or other elements of building. If mortar drops or spills, spot-clean immediately using a sponge and clean water.

G. Tolerances:

1. External corners and other conspicuous lines and levels: Maximum deviation from plumb or level ± 1/4 inch in any 10 ft section with a maximum cumulative amount of 3/8 inch in any one direction beyond 10 ft.
2. Variation from Level: Maximum 1/2 inch in 20 feet, or 3/4 inch in 40 feet or more.
3. Mortar bed joint thickness: 3/8 inch or match existing adjacent construction. Maximum deviation ± 1/16 inch
4. Mortar head joint thickness: 3/8 inch or match existing adjacent construction. Maximum deviation ± 1/16 inch
5. Vertical alignment of center line of corresponding head joints in alternate courses when using other than stacked bond. Maximum deviation ± 1/4 inch
6. Vertical alignment of center line of all head joints in total assemblage height when using other than stacked bond. Maximum deviation ± 1 inch

H. Preparation:

1. Clean masonry surfaces of any loose or deleterious material which could prevent adhesion or otherwise impair performance of installed materials.
2. Carefully remove and store fixtures.

I. Manufacturer's Recommendations: Comply with manufacturer's written approved installation instructions and with any governing regulations and industry standards applicable to work.

3.02 MORTAR MIXING

A. Thoroughly mix mortar ingredients in accordance with ASTM C 270 in quantities needed for immediate use.

B. Measure cementitious and aggregate material in a dry condition by volume. Do not measure by shovel; use a known volume measure (i.e. box or bucket).

C. Maintain sand uniformly damp immediately before mixing process.

D. Do not use anti-freeze compounds to lower freezing point of mortar.

E. Mortar Mixing Procedure:

1. General
   a. Mix all cementitious materials and aggregates between 3 and 5 minutes in a mechanical batch mixer with sufficient water to produce workable consistency.
   b. Unless acceptable, do not hand mix mortar.
   c. Maintain workability by remixing or retempering. Discard all mortar which has begun to stiffen or is not used within 2-1/2 hours after initial mixing.

2. Tuckpointing
   a. Pre-hydrate to reduce excess shrinkage.

b. Mix materials in a clean mechanical batch mixer.
c. Add only enough clean water to produce a consistency which will retain its shape when formed into a ball (about 2 total required mixing water).
d. Allow mortar to stand in this dampened condition for approximately 30 to 45 minutes.
    1) Add balance of mixing water to bring mortar to proper workable consistency (somewhat drier than conventional masonry mortars).
    2) Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material. Discard any mortar not used within 30 minutes.

3.03 MASONRY UNITS

A. General:

1. Remove existing [damaged] masonry, as required to complete Work. Prior to starting Work, verify locations with Owner.
2. Construction Tolerances, Corners, and Recess: Match existing wall conditions.
3. Provide shoring and support, as required, prior to removing existing masonry units.
4. Saw cut mortar joints of masonry units from existing walls with motor-driven saw designed to cut masonry with clean, sharp, unchipped edges; only after test cuts determine no damage to masonry units will result].
5. Cut new masonry units as required to fit adjoining work neatly.
6. Use full units without cutting wherever possible.
7. Avoid use of less-than-half-size units at corners, jambs, and at other locations.
8. Install masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line.
9. Pre-wet masonry units, as needed, in accordance with ACI 530.
10. Recondition existing support steel prior to installing new units, in accordance with Section - 09960.
11. Seal all wall penetrations (drainpipes, lightning cables, etc.) with elastomeric sealant specified in Section 07920 - Joint Sealants.

B. Mortar Bedding and Jointing:

1. Provide new wire ties to replace damaged ties.
2. Lay new units with completely filled bed and head joints. Butter ends with sufficient mortar to fill head joints and lay into place. Do not slush head joints. Tooth new units into existing masonry work, to match existing bonding patterns.
3. Spaces between masonry units and backup materials are to remain free and clear of mortar.
4. Tuckpoint head joints and top joints where new work adjoins existing masonry work in accordance with this Section.
5. Joint Widths: To match existing.
6. Exposed Joints: Prior to initial set, and when "thumbprint" hard, tool mortar joints to match existing brickwork mortar. At caulked joints, rake out mortar to required depth to be finished with sealant.
7. Concealed Joints: Cut flush joints in surfaces to be concealed or covered by other construction.

8. Collar joints: At existing collar joints, reconstruct after each course of new masonry is laid, filling vertical joint between wythes solid with mortar.

C. Establish lines, levels, and coursing indicated. Protect from displacement.

D. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.

E. Brick Units:
   1. Bond: Running.
   2. Mortar Joints: Weathered Profile.
   3. Coursing:
      a. Vertically: Average three sets of three units and three mortar joints to equal 12 inches.

F. PLACING AND BONDING

   1. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
   2. Lay hollow masonry units with full bedding on head and bed joints.
   3. Do not lay mortar bed more than 2 ft ahead of work.
   4. Do not furrow bed joints.
   5. Completely butter ends and head of each unit with mortar and shove unit into place so that mortar squeezes out top of head joint and bed joint. Do not slush head joints.
   6. At cavity wall sections, cut off and scoop out mortar that extrudes from bed and head joints on outer and inner faces of wythe.
   7. Do not disturb, tap, shove or push units once they are laid in their final position. Where adjustment must be made, remove mortar and replace.
   8. Tooth masonry at intersections and external corners.
   9. Perform job site cutting of masonry units with proper masonry saw to provide straight, clean, unchipped edges. Prevent broken masonry unit corner or edges. Do not break masonry units with a hammer.
   10. Strike exterior of mortar joints flush during laying. When mortar is thumb print hard on exposed surfaces, tool joints concave with a cylindrical pointing tool slightly larger than masonry joint to compact mortar thoroughly.
   11. Slightly bevel bed joint mortar away from cavity space before placing unit to minimize mortar protrusions into any cavity space intended to be free of mortar. Back parge or strike mortar extrusions in cavity space.
   12. Above flashing, provide weeps at every third head joints.
   13. Isolate top joint of masonry walls from horizontal structural framing members and slabs or decks with compressible joint filler.

G. WALL CAVITY BEHIND VENEER

   1. Do not permit mortar to drop or accumulate into cavity air space or to plug weeps.
   2. Provide clean-out every third unit of bottom course to remove any mortar droppings in cavity space, clean mortar at openings as necessary prior to mortar hardening.
   3. Build outer wythe to permit installation of cavity insulation.

H. REINFORCEMENT AND ANCHORAGE

1. General: All masonry reinforcement and anchors should be completely bedded in mortar. Direct masonry unit-to-anchor contact is not permitted.
2. Install horizontal joint reinforcement 16 inches on center.
3. Place masonry joint reinforcement in first and second horizontal joint above and below openings. Extend minimum 16 inches each side of opening.
4. Place joint reinforcement continuous in first and second joint below top of walls.
5. Lap joint reinforcement ends minimum 6 inches.
6. Install wall ties in masonry back-up for bonding veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place at maximum 3 inches on center each way around perimeter of openings, within 12 inches of openings.

I. EXPANSION AND CONTROL JOINTS

1. Do not continue horizontal joint reinforcement through expansion [and control] joints.
2. Construct expansion [and control] joints in accordance with Section 07922 - Joint Sealants for Restoration for proper sealant performance.
3. All expansion and control joints should be clear, free of mortar and other construction materials.

3.04 GROUT INSTALLATION

A. Remove masonry protrusions extending 1/2 inch or greater into cells or cavities to be grouted.

B. Place grout within a 1/2 hour from introducing water into mixture and prior to initial set.

C. Confine grout to areas indicated on Drawings. Use materials to confine grout that permits bond between masonry units and mortar.

D. Do not exceed maximum grout pour height given in ACI 530.1/ASCE 5/TMS 402 Table 7.

E. Place grout lifts not exceeding 5 feet.

F. Consolidate grout at time of placement.

1. Consolidate grout pours 12 inches or less in height by mechanical vibration or by paddling.
2. Consolidate pours exceeding 12 inches in height by mechanical vibration and reconsolidate by mechanical vibration after initial water loss and settlement has occurred.

G. Provide horizontal construction joints between grout pours, with grout stopping a minimum 1/2 inch below mortar joint, except at top of wall.

H. Do not displace reinforcement while placing grout.

3.05 REPOINTING EXISTING MASONRY

A. General: Repoint mortar joints containing static cracks, deterioration, holes or voids. New bedding and pointing mortar mix should not have a compressive strength that exceeds existing mortar or masonry materials.

B. Joint Preparation:

1. Clean existing masonry surfaces to remove dirt, efflorescence, plant fungi, etc. prior to tuckpointing work.
2. Rake out mortar from joints to depths equal to 2-1/2 times their widths but not less than 3/4 inch by use of motor driven saw designed to cut masonry with clean, sharp, unchipped edges; only after test cuts determine no damage to masonry units will result].
3. Remove mortar from masonry surfaces within raked-out joints to provide square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
4. Do not spall edges of masonry units or widen joints. Replace any masonry units which become damaged.

C. Joint Pointing:

1. Rinse masonry joint surfaces with water to remove any dust and mortar particles. Time application of rinsing so that, at time of pointing, excess water has evaporated or run off, and joint surfaces are damp but free of standing water.
2. Apply pointing mortar in minimum 3 layers with each of first and second layers filling approximately 2/3 of joint depth and third layer remaining 1/3. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing brick have rounded edges recess final layer slightly from face. Take care not to spread mortar over edges onto exposed masonry surfaces, or to featheredge mortar.
3. When mortar is thumbprint hard, tool joints to match original appearance of joints, unless otherwise indicated. Remove excess mortar from edge of joint by brushing. Cure mortar by maintaining in a damp condition for not less than 72 hours. Where repointing work precedes cleaning of existing masonry, allow mortar to cure not less than 14 days before beginning cleaning work.

3.06 MASONRY FLASHINGS

A. At existing flashing, remove masonry at flashings locations indicated on Drawings as required to complete work.

B. Install new flashing system in accordance with Section 07620 – Sheet Metal Flashings and Trim.

C. Install new masonry units to match and align with existing units, joints and coursing true and level, faces plumb and in plane.

D. Install weeps in veneer at 24 inches o.c. horizontally directly above flashing.

3.07 SAW-CUTTING REGLETS AND EXPANSION JOINTS

A. Perform all saw-cutting of masonry using motor driven saw designed to cut masonry with clean, sharp, unchipped edges. Replace any masonry units which become damaged. Perform test cuts as directed by Consultant to verify no damage to masonry units will result.

B. After saw-cutting, brush, vacuum, or flush joints to remove dirt and loose debris.

C. At cracked masonry scheduled to be “routed and sealed”, saw-cut existing masonry joints as required to provide a minimum joint width of 1/4 inch, or as recommended by sealant manufacturer.

D. At masonry expansion joints less than 3/8 inch wide, saw-cut joints full depth to provide minimum 1/2 inch width.

E. At reglets, saw-cut masonry to receive metal flashing, as indicated on Drawings.

3.08 REMEDIAL WALL TIES

A. Fastener spacing / layout will be determined through field verification with Consultant for each location indicated on Drawings.

B. At masonry, all fasteners shall be installed in mortar T-joints, unless directed otherwise by Consultant.

C. Provide pilot entry hole approximately into face and substrate materials using a rotary percussion drill (3-jaw chuck type).

D. Drive helical wall tie into position by manufacturer’s setting tool mounted on an electric hammer drill (S.D.S. type). Setting tool shall recess tie a minimum 3/8 inch into face of masonry.

E. Patch all penetrations with an approved, compatible material, aesthetically finished to match adjacent surfaces.

3.09 MASONRY CLEANING

A. General:

1. Clean existing masonry in areas of repair work to ensure positive mortar bond.
2. Cleaning methods must be sufficiently flexible to permit adjustment of procedures and application speed for maximum effectiveness. Perform small test samples for each type of stain, starting with least aggressive procedure, to determine effectiveness and prevent substrate damage.

3. Approved cleaning methods consist of water and light abrasion with hand tools. Stains that may require more aggressive cleaning procedures, consisting of power tools or chemicals, must be approved by Consultant and demonstrated by test samples.
4. When cleaning masonry, mask lower areas as required to prevent loosened stains from soiling other surfaces, or keep lower areas saturated with water to prevent absorption of dirty run off. Remove all stains as soon as possible. Do not smear wet stains by wiping. Soak up wet stains with absorbent materials (cotton cloths).

B. Saturate masonry, and all other porous materials, with clean water prior to proceeding with cleaning work.

C. Pre-treat heavy stains and efflorescence staining with least aggressive cleaning material that will remove staining.

D. After pre-treatment, provide a general cleaning of all masonry areas using a diluted detergent.

E. Provide a complete and thorough wash-down of all masonry, and other wall system components, working from top down.

F. New Mortar:

1. After new mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter using stiff nylon brushes and clean water that is spray applied at low pressure.
2. Remove surplus mortar from faces of masonry units at time joints are struck or tooled. Mortar should be removed while it is still plastic using a clean, wet sponge or scrub brush having stiff bristles.
3. Do not use harsh cleaners, acids, abrasives to clean masonry surfaces. If a chemical cleaning agent is required, obtain initial approval from both masonry unit manufacturer and Consultant.
4. Final mortar removal is to be accomplished with a clean wet sponge or cloth. Rinse sponges or clothes frequently in clean water to remove abrasive particles. Allow any remaining film on masonry to dry to a powder.

3.10 ADJUSTING AND CLEANING

A. Clean site of all unused materials, residues, and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of Work of this Section.

C. Repair, restore, or replace all materials, landscaping, interior finishes, and damaged surfaces to satisfaction of Owner at no additional expense.

END OF SECTION 04900

SECTION 05900

STEEL RESTORATION AND CLEANING

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment, and incidentals required to perform installation, repair and restoration of structural steel and steel reinforcing components.

B. Work for this Section includes the following:

1. Cleaning and restoring existing embedded steel shapes.
2. Cleaning and restoring existing steel components.
3. Reinforcement / replacement of existing steel shapes.

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound and weathertight.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM).

C. American Institute of Steel Construction (AISC): Manual of Steel Construction.

D. American Welding Society (AWS): D1.1-96 Structural Welding Code – Steel.

E. Steel Structures Painting Council (SSPC):

1. SP 2 – Hand Tool Cleaning.
2. SP 3 – Power Tool Cleaning.
3. SP 6 – Commercial Blast Cleaning.

1.03 DELIVERY, STORAGE AND HANDLING

A. Coordinate locations for on-site staging and storage areas with the Owner.

B. Package and neatly store materials in a manner that prevents surface damage, distortion, breakage or structural weakening. Replace any damaged materials.

1.04 PROJECT CONDITIONS

A. Protect elements surrounding the work of this Section from damage or disfiguration.

B. Protect roof membrane and flashings from damage. Lay 3/4 inch plywood on traffic route over one-inch extruded polystyrene insulation board at full extent of work area.

1.05 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are primary products and materials for the specified repair work. Provide all incidental items and materials required for completion of the work in accordance with these documents.

2.02 MISCELLANEOUS MATERIALS

A. Plates / Bars: Type and strength equal to existing material. Cross-sectional area to be greater than or equal to that of the element being reinforced.

B. Welding Electrodes and Filler Metal: Type and alloy of filler metal and electrodes as recommended by producer of metal to be welded or filled, complying with applicable AWS specifications, and as required for, strength, and compatibility in fabricated items.

1. Filler metal shall match as closely as possible existing metal to be filled.

C. Shop Primers and Coatings: Reference Section 09960 - High Performance Coatings.

2.03 FABRICATION

A. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed joints of flux, and dress exposed and contact surfaces.

B. Finish exposed surfaces to smooth, sharp, well-defined lines and as required to match existing work.

PART 3 - EXECUTION

3.01 GENERAL

A. Measurements: Before ordering materials or performing work, obtain and verify all measurements at the building site. Exact measurements are the Contractor's responsibility.

B. Erect temporary protection covers over walkways, entrances, and landscaping during the course of the restoration work. Protect adjacent and lower surfaces including, sills, ledges, metal frames, and windows from damage.

C. Manufacturer's Recommendations: Comply with the manufacturer's written approved installation instructions and with any governing regulations and industry standards applicable to the work.

3.02 CLEANING, GENERAL

A. Remove Deteriorated Coatings: Use mechanical methods including scraping, wire brushing, or sanding. Use manual methods, including hand power tools for coating removal.

B. Chemical Cleaner Application methods: Apply chemical cleaners where indicated and where detail work is not accessible by removal using mechanical methods. Comply with chemical cleaner manufacturer's written instructions; use brush application methods. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.

C. Corrosion: Remove and stabilize existing deteriorating corrosion.

1. Use mechanical methods including scraping, wire brushing, or sanding. Use manual methods, including hand power tools, for corrosion removal.
2. Chemical Removal of Corrosion: Apply chemical corrosion remover where corroded spots are not accessible to mechanical methods.

D. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces including corners, moldings, and interstices, and that produces an even effect without streaking or damaging metal surfaces.

E. Neutralize chemical residue, and rinse where applicable, by working upward from bottom to top of each treated area at each stage or scaffold setting.

3.03 RECONDITION EXISTING STEEL

A. General: Recondition existing steel where exposed or indicated.

B. Procedures:

1. Clean all exposed steel surfaces to remove surface scaling and rust.
2. Inspect the condition of steel sections and existing anchors.
3. If loss of steel section is greater than 10 percent of the nominal thickness, report to the Consultant for review and corrective procedure.

4. If loss of steel section is less than 10 percent, prepare and coat in accordance with Section 09960 - High Performance Coatings.

3.04 REINFORCE EXISTING STRUCTURAL SHAPES

A. General: Reinforce existing structural components as indicated on the Drawings.

B. Procedures:

1. Relieve or re-support existing loads prior to starting any reinforcing work.
2. Clean all steel surfaces which shall be part of a welded joint to remove surface scaling, rust, oil, dirt, and coatings. Remove unsound material by grinding, gas cutting or other appropriate means.
3. Inspect the existing member to confirm the base metal thickness is adequate for the specified weld detail.
4. Position the reinforcing material as indicated on the Drawings and secure for welding by appropriate means such as clamping or tack welding.
5. Sequence welding to minimize distortion and shrinkage of the completed repair.
6. Remove all slag from welded joints. Grind out arc strikes from the existing material.
7. Full penetration welds shall be tested by a qualified testing agency. Unacceptable welds shall be replaced at no additional expense to the Owner.
8. Field coat reinforced members with an approved coating. Reference Section 09960 - High Performance Coatings.

3.05 ADJUSTING AND CLEANING

A. Clean site of all unused materials and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of the work of this section.

C. Repair, restore, or replace all materials, landscaping, interior finishes, and surfaces damaged by the Work to the satisfaction of the Owner at no additional expense.

END OF SECTION 05900

SECTION 07180

TRAFFIC COATINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide all labor, materials, equipment and incidentals necessary to perform the required scope of work on the existing substrate as specified herein.

B. Provide a complete system of compatible traffic deck coating materials to create a continuous waterproof membrane.

C. The scope of work includes:
   1. Provide new pedestrian deck coating systems.

D. Application of coating shall only be to surfaces which are structurally sound, and have been properly prepared in accordance with the manufacturer requirements. All preparatory work shall be approved by the manufacturer's representative prior to application of the coating system, including, concrete repairs, installation of building sealant, and cleaning.

E. All new materials are to be interfaced with, and integrated into, existing materials in a manner that provides an aesthetically acceptable and completely weathertight system.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM):

1. ASTM C957: Standard Specification for High-Solids Content, Cold-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface.
2. ASTM D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension.
3. ASTM D1004: Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting.
4. ASTM D471: Standard Test Method for Rubber Properties – Effect of Liquids.
5. ASTM E96: Standard Test Method for Water Vapor Transmission of Materials.
6. ASTM D2240: Test Method for Rubber Properties – Durometer Hardness.
7. ASTM D4060: Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
8. ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.

9. ASTM D822: Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
10. ASTM D4263: Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.

C. Underwriters Laboratories (UL):

1. UL 790 Class A.

1.03 SUBMITTALS

A. Product Data: Submit product literature and installation instructions.

B. Samples: Submit samples of specified traffic deck coating system. Samples shall be construed as examples of finished color and texture of traffic deck coating system only.

C. Written documentation of the proposed coating removal procedures, including overall procedures, containment methods, etc.

1.04 QUALITY ASSURANCE

A. Contractor Qualifications: Not less than five (5) current years relevant successful experience with comparable projects and employing personnel skilled in the Work specified in this Section. The skilled person shall have at least five (5) years of experience and shall have successfully completed at least two (2) projects within the past three (3) years involving quantities and complexities similar to those required under this Section.

B. Manufacturer Qualifications: The manufacturer will be a company with at least ten (10) years documented experience and regularly engaged in the manufacturing and marketing of the products specified in the construction documents.

C. Source of Materials: Obtain materials from a single source for each type required to ensure quality, color, pattern, match, and texture.

D. Requirements of Regulatory Agencies:

1. The vehicular deck coating system shall be rated Class "A" by Underwriters Laboratories (ASTM E 108/UL 790). Containers to bear Underwriters Laboratories labels.
2. Materials used in the vehicular deck coating system shall meet Federal, State and local VOC regulations.

E. Field Samples:

1. Prior to starting Work, and in conjunction with the Owner and Consultant, select an area of concrete deck representative of the total project. Remove existing coatings, prepare concrete, and apply the coating system. The various levels/components shall be stepped back so that all components are visible.
2. Manufacturer's representative and Consultant are to be notified and present during the preparation and application of the coating systems to test sample area.
3. Cleaning methods and application of the coating system is to reflect the proposed procedures and workmanship expected during full-scale application.
4. Upon completion of application and drying / curing of the test area, the Contractor shall perform thickness and adhesion testing. The Contractor, Manufacturer, Owner, and Consultant must be present at the time of the testing.

F. Pre-Installation Conference: Convene prior to commencing Work with the Owner and Consultant to discuss sequencing and installation procedures.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name and type of material.

B. Storage and Handling: Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

1.06 PROJECT CONDITIONS

A. Environmental Conditions:

1. Do not proceed with application of materials when surface temperature is less than 40° F.
2. Do not apply materials unless surface to receive coating is clean and dry, or if precipitation is imminent.

B. Protection:

1. Keep products away from heat, sparks, and flames. Do not allow the uses of spark producing equipment during application and until vapors are gone. Post “No Smoking” signs.
2. The overspray and/or solvents from coatings can carry considerable distances and care should be taken to do the following:
   a. Post warning signs a minimum of 100 feet from the work area.
   b. Mask off or cover all air intakes near the work area to prevent odors from entering occupied areas of the building or structure.
   c. Set up wind breaks when needed.
   d. Minimize or exclude all personnel not directly involved with the coating application.
   e. Provide CO_2 or other dry chemical fire extinguishers at the jobsite.
   f. Provide adequate ventilation.

3. After completion of application, do not allow traffic on coated surfaces for a period of at least 48 hours at 75° F and 50% Relative Humidity, or until completely cured.
4. Protect plants/vegetation which might be affected by coating. Use drop cloths or masking as required.
5. Provide “Wet Paint” signs to protect newly coated finishes.

1.07 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are the product requirements for the specified work. Provide all incidental items and materials required to complete the Work in accordance with these documents.

2.02 MATERIALS

A. Pedestrian Traffic Coating Systems

1. System Requirements:
   a. Primer: All porous substrates, and all other substrates as recommended by the manufacturer.
   b. Base Coat: Average dry mil thickness: 20 mils; with no area less than 17 mils.
   c. Top Coat: Average dry mil thickness: 20 mils; with no area less than 17 mils. Aggregate to be applied into top coat.

2. Acceptable Manufacturers:
   a. Iso-Flex by LymTal.

B. Cleaners:

1. Materials used for cleaning shall be approved by the coating manufacturer to ensure compatibility.
2. Pre-mixed, commercially available cleaner, specially prepared for use with spray equipment and cleaning the required exterior surfaces.

2.03 ACCESSORIES

A. Primer: As recommended by the coating system manufacturer. Note: All substrates shall be primed prior to coating application.

B. Aggregate: As provided by the coating system manufacturer.

C. Backing Rod: Closed-cell polyethylene foam rod.

D. Liquid Flashing: Provide as recommended or required by coating system manufacturer.

E. Tarps or polyethylene sheeting for protection of existing landscaping and building surfaces.

F. Masking tape: Pressure sensitive adhesive paper tape.

G. Shop Cloths: Use shop cloths or clean lint-free rags for cleaning operations.

H. Sealant for Coating System: Provide as recommended or required by coating manufacturer.

PART 3 - EXECUTION

3.01 INSPECTION

A. Concrete: Verify that the work done under other sections meets the following requirements:

1. The concrete deck surface is free of ridges and sharp projections. If metal forms or decks are used, they should be ventilated to permit adequate drying of concrete on exterior exposed deck.
2. New concrete was cured for a minimum of 28 days. (Minimum of 4,000 psi compressive strength). Water-cured treatment of concrete is preferred. The use of concrete curing agents, if any, shall be compatible with the coating manufacturer's system.
3. The concrete was finished by a power or hand steel trowel followed by soft hair broom to obtain light texture or "sidewalk" finish.
4. Damaged areas of the concrete deck are restored/repaired to match adjacent areas. Use 100% solids epoxy and sand for filling and leveling.
5. Passing moisture testing of the concrete using ASTM D4263.

3.02 PREPARATION

A. Removals - Partial: Remove areas of existing deteriorated coating system down to the existing concrete substrate using abrasion and/or blast techniques. Do not use chemicals to remove the existing coating. Probe edges of the remaining portions of the existing coating system to ensure acceptable bonding of the areas to remain. Smooth edges of the existing coating as required to provide a smooth transition between the new and existing coating systems.

B. Removals - Complete: Completely remove the existing coating system down to the existing concrete substrate using abrasion and/or blast techniques. Do not use chemicals to remove the existing coating.

C. Pending Owner and Consultant review and approval, mechanically prepare surface by shot blasting to industry standard surface texture (ICRI's CSP3-4) without causing additional surface defects in deck surface. Shot blasting does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the deck coating. If shot blasting is not practical, treat concrete surfaces with 10% to 15% solution of muriatic acid to remove laitance and impurities. After acid has stopped foaming or boiling, immediately rinse thoroughly with water. Re-rinse as required to remove muriatic acid solution. Acid etching does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the deck coating.

D. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong non-sudsing detergent. Thoroughly wash, clean, and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods. Cleaning extent shall include the adjacent areas of the existing coating that will be covered with the new coating system.

E. Cracks and Cold Joints: Visible hairline cracks (up to 1/16-inch in width) in concrete and cold joints shall be cleaned, primed as required and treated with liquid flashing a minimum distance of 2-inch on each side of crack to yield a total thickness of 30 dry mils. Large cracks (over 1/16-inch in width) shall be routed and sealed with sealant. Sealant shall be applied to inside area of crack only, not applied to deck surface. Detail sealed cracks with liquid flashing a distance of 2-inch on each side of crack to yield a total thickness of 30 dry mils.

F. Control Joints: Seal secondary control joints with sealant. Sealant shall be applied to inside area of joint only, not applied to deck surface. Detail sealed joints with liquid flashing a distance of 2-inch on each side of joint to yield a total thickness of 30 dry mils.

G. Surface Condition: Surface shall be clean and dry prior to coating. Use a moisture meter to determine if the surface is dry enough to receive the coatings per manufacturer’s recommendations.

3.03 MIXING AND THINNING

A. Mix the coating materials according to the manufacturer's recommendations, to a homogenous consistency. Thoroughly disperse any coating solids that may have settled to the bottom of the container.

B. Do not thin coating materials.

C. Ensure uniform color of coating materials between batches.

3.04 APPLICATION

A. Allow all materials to properly dry / cure between subsequent applications of the various materials, as specified by the manufacturer.

B. Primer: Apply epoxy primer to all concrete surfaces in strict accordance with procedures outlined by the manufacturer. Within 24 hours of application of primer, base coat must be applied. If base coat cannot be applied within 24 hours, re-prime.

C. Base Coat: Apply elastomeric coating material to deck surfaces to yield an average 20 dry mils in strict accordance with procedures outlined by the manufacturer. Extend base coat over cracks and control joints which have received treatment.

D. Wearing Surface Coat - Vehicular Systems: Apply elastomeric coating material to yield an average of 8 dry mils and immediately broadcast aggregate, evenly distributed, into wet material to the point of refusal. When dry, remove excess aggregate and recoat surface with elastomeric coating material to yield an average of 12 dry mils. Total system coating thickness averages 40 dry mils exclusive of aggregate.

E. Wearing Surface Coat - Pedestrian Systems: Apply elastomeric coating material and immediately broadcast aggregate, evenly distributed, into wet material, adding additional coating material as needed to completely cover/coat all aggregate.

F. Double-Texturing: After the coat to receive aggregate (the first wearing surface coat) has dried and loose aggregate has been removed, apply elastomeric coating material to yield an average of 12 dry mils and immediately broadcast additional aggregate into wet material. When dry, remove excess aggregate and recoat surface with elastomeric coating material to yield an average of 12 dry mils. Double-textured areas will yield an average of 52 dry mils, exclusive of aggregate.

3.05 FIELD QUALITY CONTROL

A. Contractor shall maintain or exceed levels of workmanship and material acceptability in regard to surface preparation, cleaning, and coating application as established by mock-up/test samples.

B. Contractor shall make provision to assist and coordinate inspections of the work by the Manufacturer and Owner Representatives, and perform adhesion testing, dry film thickness measurements, etc., as required.

3.06 ADJUSTING AND CLEANING

A. Clean site of all unused materials, residues, and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of the work of this section.

C. Repair, restore, or replace all materials, landscaping, and surfaces damaged by coating product to the satisfaction of the Owner at no additional expense.

END OF SECTION 07180

SECTION 07190

WATER REPELLENTS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment, and incidentals required to perform specified scope of work.

B. Work for this Section includes:

1. Apply a clear, penetrating sealer to exterior surfaces as shown on drawings. Performance of this Work is initially subject to on-site mockup testing of designated sample locations.
2. Application of sealer shall only be to surfaces which are structurally sound and have been properly prepared in accordance with manufacturer's requirements. All preparatory work shall include any masonry repairs, building sealant installation, elastomeric coating applications, cleaning, etc. Work shall be approved by Manufacturer's Representative and Consultant prior to application of sealer.
3. Provide necessary protection for all materials that may be contaminated or damaged by overspray of water repellent, including metal, glass, landscaping, etc.

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is weathertight and aesthetically acceptable by Owner.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM):

1. ASTM D 1653: Standard Test Method for Water Vapor Transmission of Organic Coating Films.
2. ASTM D 5703: Standard Practice for Preparatory Surface Cleaning for Clay Brick Masonry.
3. ASTM E 514: Standard Test Method for Water Penetration and Leakage through Masonry.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Not less than twenty (20) years successful experience with production and sales of exterior masonry sealers intended for Work of this Section.

B. Source of Materials: Obtain materials from a single source for each type required to ensure quality, color, pattern, and texture match.

C. Field Samples:

1. Prior to starting Work, and in conjunction with Owner and Consultant, select a minimum of two (2) separate, full-sized, erected wall areas which are representative of total project for sample cleaning. Apply approved water repellent to one half of field constructed mock-up panels before proceeding with installation.
2. Cleaning methods and application of sealer system are to reflect proposed procedures and workmanship expected during full-scale application.
3. Upon completion of and drying / curing of each test area, Contractor shall perform surface porosity testing of treated wall area(s) with Rilem tubes, as specified in Field Quality control portion of this Section. Contractor, Manufacturer, Owner, and Consultant must be present at time of testing. Results of testing will be used to evaluate preparation requirements and type / concentration of sealer(s) that are effective in reducing water penetration, with minimal discoloration of substrate, and proper penetration characteristics prior to full-scale application.
4. Recommended test method is RILEM 25 PEM Method II.4. Typically, acceptable results are an 80% improvement between treated and untreated areas.
5. Location of approved test sample areas shall remain undisturbed during Work and be retained as a standard for judging completed Work. Do not alter or destroy sample areas until Work is completed.

D. Provide copies of manufacturer required job logs and test samples to Owner and Consultant.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site with packages intact and with labels identifying manufacturer, product name and lot numbers when appropriate.

B. Store approved materials in accordance with manufacturer's instructions. As a minimum, comply with following:

1. Store all materials off ground under watertight cover and away from sweating walls, damp surfaces, and freezing temperatures.
2. Immediately remove damaged or deteriorated materials from job site.
3. Use necessary means to ensure safe storage and use of materials, as well as prompt and safe disposal of waste.

C. Personnel shall be warned against prolonged breathing of vapors and contact of materials with skin or eyes. Keep products away from heat, sparks, and flame. Do not allow uses of spark producing equipment, such as switches, appliances, etc., during application and until vapors are gone. Post “No Smoking” signs.

1.05 PROJECT CONDITIONS

A. Comply with manufacturer's requirements for environmental conditions under which systems can be applied.

B. Do not apply sealer in areas where dust is being generated.

C. Do not apply sealer in snow, rain, fog, or on damp/wet surfaces.

D. Sealer application may be continued during inclement weather if areas and surfaces are enclosed and within temperature limits specified by manufacturer during application and drying periods.

E. Protect elements surrounding Work from damage or disfiguration.

1.06 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Acceptable water repellent products listed are for guideline purposes only. Repellent performance is based on many factors and as such, field testing of several materials may be required before an approved product is determined. Reference Field Testing requirements described in Part 1 of this Section.

B. Provide all incidental items and materials required for completion of Work in accordance with these documents and manufacturer requirements.

C. Comparable materials by other manufacturers will be considered when requested in writing prior to bidding. No substitute will be considered approved unless confirmed in writing by Consultant.

2.02 MATERIALS

A. Siloxane/Silane Penetrating Water Repellent Sealer.

1. Water Vapor Transmission: Minimum of 90% compared to untreated surfaces when tested to ASTM E 96.

2. Water Penetration / Leakage: Minimum 100% compared to untreated surfaces when tested to ASTM E 514.
3. Reduction of Water Absorption: Minimum 85% compared to untreated surfaces when tested to ASTM C 97.
4. Resistance to Accelerated Weathering: No loss in repellency after 2,500 hours, ASTM G 154.
5. Apply to clay brick, limestone and cast stone.
   a. Acceptable Products:
      1) Evonik - Protectosil Chemtrete PB-100
      2) ProSoCo, Inc. - SL 100

B. Cleaners:

1. Materials used for cleaning and water repellent treatments shall be approved by sealer manufacturer to ensure compatibility.
2. Pre-mixed, commercially available cleaner, specially prepared for use with spray equipment and cleaning existing materials.

C. Miscellaneous Materials:

1. Tarps or polyethylene sheeting for protection of existing landscaping and building surfaces.
2. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film forming, strippable masking material for protecting glass, metal and polished stone surfaces from damaging effect of cleaners.
   a. ProSoCo, Inc. / Strippable Masking WB

3. Masking tape: Pressure sensitive adhesive paper tape.
4. Shop Cloths: Use shop cloths or clean, lint-free rags for cleaning operations.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Contractor shall be responsible for inspecting substrate and verifying that no conditions are present which may prevent or otherwise interfere with application of proposed water repellent system or with obtaining required manufacturer's warranty.

B. Any adverse conditions which might affect performance of water repellent must be reported in writing within three calendar days of identification. Absence of such notification shall constitute Contractor's verification that existing conditions will allow application of system in accordance with these documents, as well as manufacturer's requirements and recommendations.

3.02 PREPARATION

A. General:

1. Repair, patch, and fill all cracks, voids, defects, and damaged areas of existing substrate materials. Allow repair materials to cure completely before application of product.
2. Ensure that all required sealant and elastomeric coating work has been completed prior to water repellent application.
3. Remove old paint, caulking, sealers, roofing tar, and any other materials that may inhibit penetration of water repellent product.
4. Clean all substrate surfaces. Provide approved cleaning methods to remove dirt, oil, dust, grease, tar, plant fungi, and other foreign material.
5. Treat any apparent alkali or efflorescence with proper neutralizing compound recommended by water repellent manufacturer.

B. Cleaning:

1. Thoroughly pre-wet surfaces to be cleaned.
2. Mix cleaning solution in accordance with manufacturer's instructions.
3. Using a densely packed, soft fibered washing brush, apply diluted cleaning solution freely to building surface.
4. Allow cleaning solution to remain on building surfaces for a period of approximately one to three minutes, but not to point that it dries.
5. Rinse surfaces thoroughly with fresh water, removing all cleaning compound, loose or excess mortar, residual sealant, or other materials detrimental to sealer application.
6. If surface dirt/stains remain, repeat cleaning procedures, or use an alternate surface cleaner as recommended by water repellent manufacturer.

3.03 APPLICATION

A. Verify that substrate surfaces have been cleaned and are dry before proceeding.

B. Apply product in accordance with manufacturer’s written instructions and in accordance with application procedures determined from approved field samples.

C. Consult manufacturer’s written instructions for information on application equipment to be used and precautions to be taken with specified products.

D. Do not dilute or alter product, unless otherwise specified by manufacturer.

E. In general, application shall consist of:

1. Saturate relatively small sections with water repellent at coverage rates determined by approved field samples and recommended by manufacturer. Apply product from bottom-up. Always flood material with a 4-inch to 8-inch rundown onto surfaces to assure maximum saturation into substrate.
2. Allow sealer to be absorbed into wall for 5 to 15 minutes, depending upon drying conditions.
3. If required, apply a second coating of sealer to achieve proper coverage and penetration.
4. Immediately wipe-off and clean water repellent from wall and surrounding surfaces with a window squeegee and dry, clean, lint-free cloths.

3.04 FIELD QUALITY CONTROL

A. Contractor shall maintain or exceed levels of workmanship and material acceptability in regard to surface preparation, cleaning, and application as established by field samples.

B. Contractor shall make provision to assist and coordinate inspections of Work by Manufacturer and Owner.

C. Surface Porosity Tests:

1. During Work, conduct surface porosity tests based upon Rilem Test Method No. II.4, Measurement of Water Absorption Under Low Pressure.
2. Locations to be tested will be selected by Consultant at 30%, 60%, and 90% completion of work. At least three (3) locations will be tested at time of each test period.
3. Report results to Manufacturer and Consultant using form furnished in Section 00900 - Project Forms.

3.05 ADJUSTING AND CLEANING

A. Clean site of all unused water repellents, residues, rinse water, wastes, and effluents in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and non-masonry surfaces, following completion of Work of this Section.

C. Repair, restore, or replace all materials, landscaping, and non-masonry surfaces damaged by exposure to sealer product to satisfaction of Owner at no additional expense.

END OF SECTION 07190

SECTION 07272

FLUID-APPLIED, VAPOR-PERMEABLE MEMBRANE AIR BARRIERS

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. 40 dry mil thickness fluid-applied vapor-permeable membrane of synthetic polymer, fire retardant composition for use as an air and water resistive barrier in exterior walls.

B. Monolithic, fully-adhered membrane and accessory products installed as continuous air and water resistive barrier assembly over substrates of Project's opaque walls as indicated on Drawings.

C. Air and water resistive barrier assembly providing air and watertight coverage over these conditions.

1. Joints between building materials such as concrete and brick masonry, mortar joints and pre-cast concrete.
2. Junctions between walls and floors, between walls at building corners and between walls, and structural penetrations.
3. Termination at perimeter construction and through wall flashing.
4. Junction to air & water barrier in roof, below grade or other adjacent systems.

D. Air and water resistive barrier assembly performing as a liquid water drainage plane flashed to discharge to exterior any incidental condensation or water penetration.

1.02 REFERENCES

A. ASTM C 920 Standard Specification for Elastomeric Joint Sealants.

B. ASTM C 1305 Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane

C. ASTM C 1522 Standard Test Method for Extensibility after Heat Aging of Cold, Liquid-Applied Elastomeric Waterproofing Membrane

D. ASTM D 1970 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep slope roofing Underlayment for Ice Dam Protection

E. ASTM D 4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

F. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials

G. ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials

H. ASTM E 783 Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors

I. ASTM E 1354 Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter

J. ASTM E 2178 Standard Test Method for Air Permeance of Building Materials

K. ASTM E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

1.03 PERFORMANCE REQUIREMENTS

A. Product shall meet following requirements:

REQUIREMENT	RESULT	TEST METHOD
Air Permeance – on Porous Substrate	Not more than 0.02 L/s*m2 at 75 Pa (0.004 CFM/ft2 at 1.57 PSF)	ASTM E-2178, mod sprayed on CMU
Air Permeance – Free Film	Not more than 0.02 L/s*m2 at 75 Pa (0.004 CFM/ft2 at 1.57 PSF)	ASTM E-2178
Low Temperature Flexibility	No cracking at minus 20 degrees F, 180 degree bend over 1 inch mandrel	ASTM D 1970
Low-Temperature Crack Bridging	No cracking after 10 cycles at minus 15 deg F	ASTM C 1305, mod 40 mil membrane thickness
Long-Term Aging/ Flexibility	No cracking or tearing after aging	ASTM C 1522, mod 40 mil membrane thickness OR CGSB 71-GP-24M
Fastener Sealability	No water leaking through nail penetration after 24 h.	ASTM D 1970
Water Resistance	Product spray-applied to CMU and gypsum sheathing with joint shall resist a 55 cm (22 inch) column of water for 5 hours, no leaking or wet through.	AATCC-127 - mod, static head generated with 5”diameter PVC pipe sealed to specimen
Pull Adhesion	Not less than 16 lbf per square inch (or report value at substrate failure) on glass-faced gypsum sheathing and concrete masonry unit (CMU)	ASTM D 4541, modified 4 inch wood puck
Water Vapor Permeance	Not less than 5 Perms	ASTM E-96, Water Method (B)
Surface Burning Characteristics	Flame Spread Index: Not more than 25 Smoke Generation Index: Not more than 450	ASTM E 84, sample tested at full coverage, 40 mil dry film, cement board substrate
Measurement of Heat Release Rate by Cone Calorimeter	Effective Heat of Combustion: Not more than 12.3 MJ/kg Total Heat Released: not more than 14.7 MJ/m2 Peak Heat Release: Not more than 167 kW/m2	ASTM E 1354, horizontal orientation, 50 kW/m2 heat flux

1.04 SUBMITTALS:

A. Shop drawings showing locations and extent of air barrier and details of all typical conditions.

B. Manufacturer's technical data sheets and safety data sheets for product and accessories.

C. Manufacturer's installation requirements.

D. Certification of compatibility by manufacturer, listing all materials on project with which product and accessories may come into contact.

E. Free film sample of product at representative cured thickness, minimum 2-inch by 3-inch size.

F. Sample of sheet detail flashing and transition membrane, minimum 2-inch by 3-inch size.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Shall be experienced in applying same or similar materials and shall be specifically approved in writing by Manufacturer.

B. Single-Source Responsibility: Obtain product and accessories from single manufacturer.

C. Product and Accessories shall comply with all state and local regulations controlling use of volatile organic compounds (VOCs).

D. Field-Constructed Mock-Ups: Prior to installation on Project, apply product and accessories on mock-up to verify details under shop drawing submittals, to demonstrate tie-ins with adjoining construction and other termination conditions and to become familiar with properties of materials in application:

E. Cooperate and coordinate with Owner's inspection and testing agency. Do not cover any installed product unless it has been inspected, tested and approved.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to Project site in original packages with seals unbroken, labeled with manufacturer's name, product, lot number and directions for storage.

B. Store materials in their original undamaged packages in a clean, dry, protected location and within temperature range required by manufacturer.

C. During cold weather, protect product in containers and spray equipment from freezing. Maintain product temperature within acceptable range for spray application, as required by air barrier manufacturer.

1.07 PROJECT CONDITIONS

A. Do not apply product or accessories during rain or accumulating snowfall.

B. Apply product and accessories within approved ambient and substrate temperature range stated in manufacturer's literature.

C. Do not apply product or accessories over incompatible materials.

D. Observe safety and environmental measures indicated in manufacturer's SDS, and mandated by federal, state and local regulations.

PART 2 – PRODUCTS

2.01 GENERAL

A. Listed are products and materials for specified work. Provide all incidental items and materials required to complete Work in accordance with these documents.

2.02 BASIS OF DESIGN

A. Carlisle Coatings & Waterproofing, Incorporated. 900 Hensley Lane, Wylie, TX 75098. Phone 1-800-527-7092. Website http://www.carlisleccw.com.

1. Fire Resist Barritech VP, for installation at 40 degrees F and above.

B. Approved equal meeting specified level of performance.

2.03 ACCESSORIES

A. Sheet Detail Flashing: Foil composite faced rubberized asphalt flashing, minimum 0.040-inch (40 mil) thickness.

1. Others as approved by air barrier membrane manufacturer.

B. Contact Adhesive: Carlisle Coatings & Waterproofing, Incorporated: CCW-702 Solvent-Based, CCW-702 LV VOC Compliant Solvent-Based, or CCW-702 WB Water-Based, CAV-GRIP™ Aerosol Spray or Travel-Tack portable aerosol spray cans.

1. Others as approved by air barrier membrane manufacturer.

C. Liquid Detail Flashing. Barribond, Silane-terminated polyether, minimum 90% solids. ASTM C 920 Type S, Grade NS, Class 25, Use NT. 0.040-inch (40 mil) thickness application.

1. Others as approved by air barrier membrane manufacturer.

D. Transition Membrane: CCW SURE-SEAL Pressure-Sensitive Elastoform by Carlisle Coatings & Waterproofing, Incorporated.

1. Others as approved by air barrier membrane manufacturer.

E. Transition Membrane Primer: Carlisle Coatings & Waterproofing, Incorporated: SURE-SEAL HP-250 Primer, SURE-SEAL EP-95 Splicing Cement or SURE-SEAL Low VOC EPDM Primer.

1. Others as approved by air barrier membrane manufacturer.

F. Reinforcing Fabric: DCH Reinforcing Fabric by Carlisle Coatings & Waterproofing, Incorporated Woven, synthetic polymer fabric.

1. Others as approved by air barrier membrane manufacturer.

G. Fill Compound: CCW-703 V or CCW-201, 2-part, non-sag polyurethane sealant.

1. Carlisle Coatings & Waterproofing, Incorporated.
2. Others as approved by air barrier membrane manufacturer.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions affecting installation of air & vapor barrier and accessory products for compliance with requirements. Verify that surfaces and conditions are suitable prior to commencing Work of this section. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Verify that wall assemblies are dried in, such that water intrusion will not occur from above, behind or around air barrier installation.

C. Mortar joints shall be struck flush and shall be free of voids. Mortar droppings shall be removed from brick ties and all other surfaces accepting air barrier.

3.02 SURFACE PREPARATION

A. Concrete masonry unit (CMU) wall shall be prepared as follows to accept air & vapor barrier:

1. Surfaces shall be free of contaminants such as grease, oil and wax on surfaces to receive membrane.
2. CMU surfaces shall be free from projections.
3. Strike all mortar joints flush to face of concrete block.
4. Fill all voids and holes with mortar, sealant or other approved fill material.
5. Surface irregularities shall be ground flush or made smooth.
6. Fill around all penetrations with mortar, sealant or other approved fill material and strike flush.
7. If surfaces cannot be made smooth to satisfaction of Architect, it will be responsibility of trade to alternatively apply a parge coat (typically one part cement to three parts sand) over entire surface to receive Air Barrier Membrane.
8. Remove mortar droppings on brick ties, shelf angles, brick shelves or other horizontal obstructions.

B. Fill cracks, gaps and joints with fill compound, detail sealant or other material approved by air barrier manufacturer.

C. Apply a ¾ inch cant of fill compound or detail sealant at intersection projecting perimeter conditions.

3.03 INSTALLATION

A. Additional materials and installation are required at joints, transitions, openings, terminations, penetrations and similar surface irregularities. Perform detailing in accordance with manufacturer's instructions.

3.04 INSTALLATION

A. Apply product and accessories over wall surfaces as indicated in Project drawings.

B. Apply product by spray, roller, brush or other method as recommended by air barrier manufacturer. Apply product at specified wet mil thickness in accordance with air barrier manufacturer's requirements.

C. Verify compliance with air barrier manufacturer's minimum required thickness by documenting product use per area. Perform and document wet mil thickness measurements every 100 square feet, or more frequently if required, to establish uniform and adequate coverage.

D. Installation shall produce complete coverage of opaque substrates as indicated in Drawings.

E. Product and accessories shall be fully adhered to substrates. Defects such as holes, fish-mouths, blistering, de-lamination, bridging or thin spots shall be repaired according to air barrier manufacturer's instructions.

3.05 SCHEDULE

A. Through-wall flashing may be installed before or after product. Seal termination of through-wall flashing to product according product manufacturer's instructions.

B. Exterior masonry shall be installed after product.

C. Sequence Work to enable air barrier continuity at perimeter and through wall flashing conditions, as indicated in Project drawings.

END OF SECTION 07272

SECTION 07625

METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 DESCRIPTION

A. Provide labor, materials, equipment, and incidentals required to perform installation, repair and restoration of sheet metal work.

B. Work for this Section includes:

1. Provide sheet metal components and required accessories for following:
   a. Through-wall flashing
   b. Misc. metal flashing

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound and weathertight.

1.02 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM)

1. ASTM A 653: Steel Sheet, Zinc Coated (Galvanized) of Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A 666: Austenitic Stainless Steel Sheet, Strip, Plate, and Flat bar.
3. ASTM A 924: Steel Sheet, Aluminum-Zinc-Alloy-Coated by the Hot-Dip Process, Structural (Physical) Quality.
4. ASTM B 32: Solder Metal.
5. ASTM B 101: Lead-Coated Copper Sheet and Strip for Building Construction.
6. ASTM B 209: Aluminum and Aluminum-Alloy Sheet and Plate.
7. ASTM B 370: Copper Sheet and Strip for Building Construction.
8. ASTM B 749: Lead and Lead Alloy Strip, Sheet, and Plate Products.

C. Factory Mutual (FM)

1. Factory Mutual Windstorm Approval

D. Underwriters Laboratories (UL)

1. UL 580: Test for Wind Uplift Resistance of Roof Assemblies

E. Copper Development Association (CDA): Copper in Architecture – Handbook.

F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Architectural Sheet Metal Manual.

G. Copper and Common Sense by Revere Copper.

1.03 PERFORMANCE REQUIREMENTS

A. Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. When required, fabricate and install copings capable of resisting anticipated for building according to recommendations in FMG Loss Prevention Data Sheet 1-49.

1.04 PRODUCT HANDLING

A. Coordinate locations for on-site staging and storage areas with Owner.

B. Package and neatly store materials in a manner that prevents surface damage, distortion, breakage or structural weakening. Slope metal sheets to ensure drainage. Replace any damaged materials.

1.05 PROTECTION

A. Protect elements surrounding Work from damage or disfiguration.

1.06 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are primary products and materials for specified repair work. Provide all incidental items and materials required for completion of Work in accordance with these documents.

2.02 METAL COMPONENTS

A. Metal components used for through-wall flashings shall be:

1. Stainless Steel: ASTM A 666, Type 304, soft temper, 24 gage thick; smooth finish.
2. Drip Edge Flashing, 26 gauge; Acceptable Manufacturers: Heckmann, Hohmann and Barnard.

B. Shop Fabricated Metal Components

1. Qualifications
   a. Fabricating Contractor must have at least five (5) years documented experience fabricating and installing similar sheet metal assemblies. Provide references to Consultant upon request.
   b. Precision must be used in fabrication of assemblies in accordance with industry standards.

2.03 ACCESSORIES

A. Flexible Sheet Flashing:

1. Type: Self-adhering, reinforced, rubberized asphalt sheet membrane.
2. Thickness: Minimum 40 mils.
3. Acceptable Product: Perm-A-Barrier Wall Flashing by Grace Construction Products.
4. Primer: Perm-A Barrier Surface Conditioner or as recommended by sheet membrane manufacturer.
5. Provide minimum 1 inch high, stainless steel or aluminum termination bar anchored 8 to 12 inches on-center along top edge of sheet flashing.
   a. Acceptable Products:
      1) Heckmann Building Products #1050-T2-SS
      2) Hohmann& Barnard, Inc T2-Termination Bar

B. Seam and Lap Joints Membrane:

1. Type: Rubberized asphalt-based liquid membrane.
2. Acceptable Product: Bituthene Liquid Membrane by Grace.

C. Anchors/Fasteners

1. Masonry: Hilti Kwik-Con II or ITW Tapcon screw anchors, minimum 1/4 inch diameter shank, and of sufficient length to provide minimum 1-1/4 inch embedment into masonry. Where exposed to exterior, provide paint fasteners (matching flashing color), with weather-seal washers.
2. Steel: Self-drilling / tapping screws.
3. Protective Coating: All fasteners to be Stainless steel.

D. Blind Rivets: Stainless steel.

E. Sealant: Refer to Section 07922, Joint Sealants for Restoration for specific material requirements.

F. Solder: ASTM B 32, Class 50A or 50B, Bar Form, 50% block tin and 50% pig lead.

G. Flux: Conforming to ASTM B813.

PART 3 - EXECUTION

3.01 GENERAL

A. Examine areas of Work and verify that existing conditions are acceptable for specified installation procedures. Report, in writing, adverse conditions that could affect performance of Work within five calendar days. Absence of written notification will indicate Contractor's acceptance of existing project conditions.

1. Verify surfaces to receive sheet metal are clean and in sound condition.
2. Examine substrates and conditions under which sheet metal components are to be installed and verify that Work will properly commence.

B. Measurements: Before ordering materials or performing work, obtain and verify all measurements at building site. Exact measurements are Contractor’s responsibility.

3.02 GENERAL FABRICATION

A. Form sections to shape indicated on Drawings, accurate in size, square, and free from distortion or defects.

B. Form sheet metal on a bending break. Perform shaping, trimming, and hand seaming in shop as far as practicable, with proper sheet-metal working tools. Make angle of bends and folds for interlocking metal with full regard for expansion and contraction, to avoid buckling or other deformation in service. All lines shall be straight and crisp except where thickness of metal dictates radius bend, and all exposed edges shall be hemmed 1/2 inch minimum.

C. Fabricate cleats of same material as sheet metal, interlocking with sheet.

D. Form pieces in longest practical lengths.

E. Hem exposed edges on underside 1/2 inch.

1. Fabricate vertical faces with bottom edge formed outward 3/4 inch at 30º angle and hemmed to form drip.

F. Soldering - Stainless Steel Flashing: Immediately prior to soldering, mechanically clean all metal to be soldered with steel wool or by other acceptable means, apply flux, and pre-tin. For lead coated copper, remove lead coating by sanding or grinding to produce bright red surface prior to applying flux and pre-tinning. Clean metal again if it is not soldered on same workday. Perform all soldering slowly with well heated heavy (10 pounds per pair) irons with properly tinned clean blunt tips. Do not use torches. Apply enough heat to sweat solder completely through full width of seam. Close clinch lock seams gently with a block of wood and mallet, then flux and show at least one full inch of continuous and evenly flowed solder. Whenever possible, do all soldering in flat position. All sloped and vertical seams shall be laced and soldered a second time. Wipe and wash clean soldered joints to remove all traces of acid from flux immediately after joints are made.

G. Flashing Joints œ Non-Expansion: Form typical non-expansion flashing joints by overlapping 4 inches and riveting and covering with membrane strip flashing and metal cover plate.

H. Expansion Joints: Layout metal flashing to minimize transverse joints. Detail transverse joints in all flashing pieces to provide a watertight connection and allow for expansion/contraction of metal as shown on Drawings. Unless shown otherwise on Drawings, provide expansion joints at 24 feet on-center maximum and at two (2) feet away from all changes in flashing direction (each side) and from all terminations of flashing. Form typical flashing expansion joints by overlapping 4 inches and covering with membrane strip flashing and metal cover plate.

I. Prefabricated Transitions/Terminations: Provide pre-fabricated corner pieces out of one piece of metal with joints locked, riveted, and soldered or covered with membrane strip flashing and sealant watertight. Space rivets at 1 inch on-center in staggered pattern unless otherwise indicated.

3.03 INSTALLATION

A. Through-Wall Flashing

1. Provide new masonry flashings at locations indicated on Drawings.
2. Remove all existing mortar, deficient flashing materials, etc. and clean surfaces that are to receive flashings.
3. Install metal flashing over substrate. Provide end dams and other transition/termination flashing, as required to provide a complete system.
4. Fully adhere membrane sheet flashing to vertical leg of metal through-wall flashing and to wall surface above flashing. Use primer on wall surfaces as required for proper adhesion. Lap ends of membrane sheet flashing a minimum 6 inches. Seal all flashing ends and terminations with compatible waterproofing liquid membrane.
5. Install termination bar along top of membrane flashing with masonry anchors at a spacing of 16 inches on-center. Cover termination bar and fasteners with liquid membrane.

3.04 ADJUSTING AND CLEANING

A. Clean site of all unused materials and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of Work of this Section.

C. Repair, restore, or replace all materials, landscaping, interior finishes, and surfaces damaged by Work to satisfaction of Owner at no additional expense.

END OF SECTION 07625

SECTION 07922

JOINT SEALANTS FOR RESTORATION

PART 1 - GENERAL

1.01 SUMMARY

A. Provide labor, materials, equipment and incidentals required for restoration of joint sealants .

B. Work for this Section includes the following:

1. Remove existing sealants, where present. Remove all remnants of existing sealants from substrates.
2. Prepare, clean and prime the substrates scheduled to receive sealant.
3. Provide backing materials (backer rod or release tape) at joint locations.
4. Provide sealant.
5. Areas of sealant replacement / application include, but are not limited to:
   a. Construction joints
   b. Masonry expansion/control joints.
   c. Perimeter of system penetrations (such as pipe).
   d. Window, louver, door, and other wall opening perimeters.
   e. Window framing joints.
   f. Glazing joints
   g. Metal coping flashing seams
   h. Miscellaneous joints indicated in the Specifications and Drawings.

C. Sealant materials are to be provided from one manufacturer. Provide accessory materials as required or recommended by the sealant manufacturer.

D. Comply with manufacturer's requirements for correct sizing, selection and installation of building sealants with respect to joint movements, construction material temperatures, and weather conditions at the project site.

E. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound, aesthetically acceptable, and weathertight.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM C 661: Test Method for Indentation Hardness of Elastomeric - Type Sealants by Means of Durometer Hardness; Shore "A".
2. ASTM C 679: Standard Test Method for Tack-free time of Elastomeric Sealants.
3. ASTM C 719: Adhesion and Cohesion of Elastomeric Joint Sealants under Cyclic Movement (Hockman Cycle).

4. ASTM C 793: Standard Test Method for Effects of Accelerated Weathering on Elastomeric Joint Sealants
5. ASTM C 920: Elastomeric Joint Sealants.
6. ASTM C 1184: Structural silicone sealants.
7. ASTM C 1523: Determining Modulus, Tear and Adhesion Properties of Pre-cured Elastomeric Joint Sealants.
8. ASTM D412: Vulcanized Rubber and Thermoplastic Elastomers – Tension.

B. Federal Specification:

1. Federal Specification TT-S 001 543 A (COM-NBS) Class A for silicone building sealants.
2. Federal Specification TT-S-00230C (COM-NBS) Class A for one-component building sealants.

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Not less than twenty (20) years successful experience with the production and sales of the sealants intended for Work of this Section.

B. Source of Materials: Obtain materials from a single source for each type required to ensure quality, color, pattern, match, and texture.

C. Regulatory Requirements: Properly dispose of all waste materials resulting from this work.

D. Field Samples:

1. Field-Constructed Samples: At least two weeks prior to the start of the sealant work, provide samples of sealant joints on the building where directed by the Consultant. Notify the Consultant at least seven days before construction of the sample, so that a representative may be present during the construction of the sample. Do not start work until the Consultant has approved the field sample and field adhesion testing (see below). Sample must be aged 14 days and cleaned before being reviewed for approval. Provide sealant joints as required to meet the field sample requirements specified in other Sections.
2. Field Adhesion Testing
   a. Notify the Consultant at least seven (7) days prior to sealant application for field adhesion testing and at least seven (7) days prior to pull-testing so that a representative can be present during both operations. Failure to notify the Consultant constitutes failure of the samples tested. Work installed without notifying the Consultant may be rejected.
   b. At least six (6) weeks prior to the start of sealant installation, apply specified sealants to each job site substrate following specified procedures. Construct three (3), 10 inch long x 1/2 inch wide x 1/2 inch deep sealant joints against each substrate. Apply bond breaker tape to the substrate surface under the last 2 inches of the sealant at each end of the strips and joints to provide a tab for testing after curing. Prepare surface (including cleaning and priming) and install sealant joints and strips as described below and as will be done during the general sealant installation.

c. Pull-Testing: After curing for 14 days at prevailing outdoor temperatures, grasp the 2 inch tabs on the ends of the joints and the strip samples and pull the sealant at 90º to the surface.
d. With acceptable applications, the sealant shall fail cohesively (tearing within itself) with no adhesive (debonding) failure.
e. If any sample debonds from the substrate, the sealant manufacturer shall make recommendations regarding changes in surface preparation or primers and submit these recommendations to the Consultant for approval. Repeat field adhesion tests using approved recommendations.
f. Repeat sealant adhesion tests as many times as required to produce an acceptable application at no additional cost to the Owner. Acceptable application required prior to full scale sealant installation.

3. Rebuild samples as many times as required to meet the Consultant¢¢s approval at no additional cost to the Owner or delay in the project schedule. Keep approved sample areas in a cleaned and finished condition throughout the duration of the project. Reproduce samples accurately in construction using identical materials, mixtures, and quality of workmanship. Mock-ups will be used to measure standards of workmanship and completed work, including finish, texture, and color.
4. Do not proceed with field samples until all materials have been submitted and approved.

E. Pre-Installation Conference: Prior to commencing work of this Section, meet with the Owner and Consultant to discuss sequencing and installation procedures.

1.04 DELIVERY, STORAGE AND HANDLING

A. Sealant materials are to be provided from one manufacturer to maintain consistent quality and color. Provide accessory materials recommended by the sealant manufacturer, pending approval by the Owner and Consultant, based on job-site adhesion testing.

B. Deliver and neatly store materials on job site in a manner that prevents damage, contamination or breakage and with packages intact displaying labels identifying manufacturer, product name, and lot numbers when appropriate.

C. Store materials in accordance with manufacturer's recommendations. Comply with manufacturer’s recommendations for minimum and maximum time and temperature limits for storage. Protect liquid components from freezing.

D. Store flammable materials in a cool dry, protected area away from sparks and open flames.

E. Materials shall be marked with the date of manufacture and shelf life. Do not use products beyond the expiration of their shelf life.

1.05 PROJECT CONDITIONS

A. Protect elements surrounding the work of this Section from damage or disfiguration.

B. 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.
2. When joint substrates are wet.
3. Where joint widths are less or more than those allowed by joint-sealant manufacturer for applications specified.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

C. Do not proceed with installation of new sealants during threatening or unfavorable weather conditions. If sealant work cannot be performed, provide the necessary protection to keep building weathertight.

1.06 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are the products and materials for the specified work. Provide all incidental items and materials required to complete the Work in accordance with these documents.

2.02 MATERIALS, 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 sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As indicated by Owner from manufacturer's standard selections.

2.03 ELASTOMERIC JOINT SEALANTS

A. Single-Component Neutral-Curing Silicone Sealant:

1. Type: Elastomeric sealant with low modulus, high elongation characteristics, capable of obtaining strong, durable bond to the building substrate. Neutral-cure silicone sealant meeting ASTM C920, Type S, Grade NS, Class 25, that is SWRI approved.
2. Intended Use: Provide as the primary sealant for weatherproofing exterior joints including perimeter joints, control . Provide as the primary sealant for weatherproofing window joints, window glazing, flashings, etc.
3. Approvals: Must meet adhesion and stain testing requirements, as well as compatibility with applied surfaces.
4. Acceptable Products:
   a. Building/Perimeter Joints: Dowsil 790 by Dow. or approved equal.
   b. Window Glazing/Frame/Flashing Joints: Dowsil 795 by Dow, or approved equal.

B. Polyurethane Sealants

1. Non-sag Polyurethane Sealant:
   a. Type: Elastomeric sealant with low modulus, high elongation characteristics, capable of obtaining strong, durable bond to the substrate that is SWRI approved.
   b. Intended Use: Provide as the primary sealant for horizontal weatherproofing joints.
   c. Approvals: Must meet adhesion and stain testing requirements, as well as compatibility with applied surfaces.
   d. Acceptable Products: Sika Corporation, Inc. / Sikaflex15 LM, Pecora Corp. / Dynatrol II, or approved equal.

C. Precured Silicone Seal:

1. Type: Preformed, ultra-low modulus silicone flashing.
2. Intended Use: Cover transverse joints in window framing.
3. Approvals: Must meet adhesion and stain testing requirements, as well as compatibility with applied surfaces.
4. Acceptable Products:
   a. Dowsil 123, bonded with Dowsil 795 sealant, or approved equal.
   b. Tremco Spectrum Simple Seal, bonded with Spectrem 1, or approved equal.

5. Size: TBD, verify in field

2.04 JOINT-SEALANT BACKING

A. Backer Rod:

1. Type: Closed-cell, polyethylene rod. The diameter of the rod is to be approximately 25% greater than joint width except quarter round or triangular rod (for fillet joints) which shall not be over-sized. Surface skin of rod shall be continuous and unbroken and of sufficient thickness to preclude outgassing and formation of voids in the overlying sealant.
2. Acceptable Product:
   a. HBR by Nomaco

b. Kool-Rod by W.R. Meadows

3. Installation: Sized and shaped to control sealant depth and otherwise contribute to producing sealant performance.

B. Bond Breaker Tape:

1. Type: Pressure sensitive adhesive polyethylene tape to which sealant does not bond, as recommended by sealant manufacturer.
2. Use: Apply bond breaker tape at those locations where two-sided sealant adhesion is required, and where a backer rod cannot be installed.
3. Thickness: 0.006 inch (6 mil.)
4. Width: As required for application.

2.05 ACCESSORIES

A. Primer:

1. All substrate surfaces must be primed, except glass; no exceptions.
2. Provide primers recommended by the sealant manufacturer for the specific job-site substrate(s).
3. Verify compatibility of primer with wall finishes prior to application.

B. Joint Cleaner: 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 adhesion of sealants to joint substrates. Test the compatibility of joint cleaner on existing surfaces.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

D. Shop Cloths: Use shop cloths or clean, lint-free rags for joint cleaning operations.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine existing conditions in the area of work and verify that no conditions are present that prevent or otherwise interfere with the installation of the specified work.

B. Adverse conditions are to be reported in writing within three calendar days. Absence of such notification will constitute the Contractor's acceptance of existing conditions.

C. Before ordering materials or performing work, obtain and verify all measurements at the project site. Exact measurements are the Contractor’s responsibility.

3.02 PREPARATION

A. General:

1. Cut out and completely remove existing sealants, backer rods, etc., prior to installing new materials.
2. Saw-cut existing masonry to widen joint if necessary as determined by requirements in Section 04900 – Masonry Restoration.
3. Coordinate sealant removal and replacement efforts so that existing building joints do not remain open at the end of each work day.
4. Where joints extend below grade, remove soil to allow caulking of entire joint length. Aside from soil removal all cleaning and installation instructions remain the same.

B. Joint Cleaning: Clean out joints immediately before installing joint sealants to comply with sealant manufacturer's written instructions, except as modified below:

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 bond with joint sealants. Remove loose particles remaining after cleaning operations by vacuuming or blowing out joints with oil-free compressed air. Solvent clean all surfaces to receive sealant, following the manufacturer's recommendations. Protect adjacent building envelope components from exposure to the cleaners.
3. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Protect adjacent building envelope components from exposure to the cleaners.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.03 INSTALLATION

A. Install sealant backing materials 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 sealant movement capability.

1. Unless noted otherwise, install clean, dry backer rod, quarter round rod, or bond break tape, in or over all joint openings against dry substrates. Remove all wet materials from the job site. Replace any backer rod not sealed over by the end of each day and solvent clean surfaces again.

2. Change rod sizes as frequently as required by the variation in the joint width. Do not twist rods together. Butt ends of rods tightly. Provide a full range of rod sizes at the site of all sealant work.
3. Do not touch with fingers or otherwise contaminate the substrate surfaces while inserting the backer rod or bond breaker tape.
4. Do not rupture the skin of the closed cell backer rod during installation. Do not cut rod lengthwise as substitute for smaller diameter rod. Remove any rod containing punctures and solvent clean the surfaces again.

B. Apply primer to all substrates, except glass, after backing material installation. Apply primer to clean, dry substrates at ambient temperatures above 45°F.

1. Do not dilute materials.
2. Pour primer into a clean container for use. Do not pour more than a ten-minute supply into container to prevent deterioration.
3. Replace cap on primer can immediately after pouring. Remove from the site any primer that contains a white precipitate or that has thickened.
4. Apply primer with a clean brush or dry lint-free cloth. Do not apply primer to exposed surfaces beyond sealant. Confine primer to areas of sealant bond only; do not allow spillage or migration onto adjoining surfaces. Mask all surfaces before priming, except where surface irregularities will allow the primer to wick beneath the masking tape.
5. Use only one coat of primer. Do not apply primer in a thick layer, which will form a white, powdery film. Flooding of the substrate surface with primer is not permitted. Remove any films with a clean, dry, lint-free cloth and repair in accordance with manufacturer's written recommendations.
6. Allow primer to dry. Do not allow primer to become wet before sealant application.

C. Joint Design:

1. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow sealant movement capability.
2. For joint widths greater than 1 inch, submit installation recommendations from the manufacturer for approval by the Consultant.
3. For typical butt sealant joints, place the backer rod or bond breaker so the sealant depth measured at the center of the joint after tooling is one-half of the sealant joint width, with a min. depth of 1/4 inch and a maximum depth of 1/2 inch.
   a. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

4. At fillet (triangular) joints, extend the sealant at least 3/8 inch onto the substrate beyond the bond breaker tape or backer rod and at least 5/8 inch onto the substrate perpendicular to the tape or rod. The minimum thickness between the edge of the tape or rod and surface of the sealant joint shall be at least 1/4 inch.
5. Avoid three-sided adhesion at all sealant joints.
6. Do not prepare or seal over masonry that is less than 21 days old or was pointed within 21 days.

D. Application

1. Inspect each cartridge or container of sealant before use and verify that the production date is within six months of the date of application. Remove from the site all sealant more than six months old. Each applicator shall understand the method of coding the production date on the cartridge.
2. Mask all exposed surfaces, not masked for priming, along joint before applying sealant.
3. Recheck correct backer rod and bond breaker tape positioning before applying sealant.
4. Apply sealant only to clean, dry, primed surfaces (where required) at ambient temperatures above 45°F. Seal joints within 10 hours of primer application.
5. Fill all joints solidly and continuously with sealant, neatly applied with a standard caulking gun in a continuous motion, using a slight pressure. "Push" the sealant bead ahead of the nozzle; do not "drag" the nozzle.
6. Within five minutes of sealant application and before skin develops on sealant, dry tool the joint surface with a concave tool to insure intimate contact with substrate and to eliminate air bubbles. The use of soaps, oils, water and/or alcohols as tooling aids is not permitted. Provide a smooth, uniform finished surface with indicated profile.
7. Mate joints formed from different colored sealants before skin forms on the sealant.
8. Remove masking tape within ten minutes of tooling. Avoid contaminating adjacent surfaces with excess sealant. Remove all traces of smears and droppings on metal or glass surfaces promptly, using a solvent recommended by the sealant manufacturer that will not damage or discolor the building surfaces. Remove smears and droppings on porous surfaces by mechanical means after the initial cure of the sealant. Remove excess sealant from surfaces adjacent to joints.
9. Coordinate work with other trades to prevent contamination of fresh sealant by dust or other debris.

E. Precured Silicone Seal

1. Clean and prime all surfaces to receive sealant as specified above. Apply a bead of bonding sealant on each side of the joint to be covered with preformed silicone flashing. Bead shall be 1/4 inch for rough surfaces and 1/8 inch for smooth surfaces. For severely rough surface, additional sealant may be required to fill valleys. The bead of sealant applied should provide a bonding area of at least 1/2 inch wide when the flashing is applied.
2. Within 10 minutes from application of the sealant beads, press the preformed flashing into the wet sealant and back-up substrate. Set the flashing uniformly in place using hand-pressure or a hand roller.
3. Overlap end laps at least 1 inch.
4. At corners and other transitions, overlap adjacent section the entire width. Ensure the sealant bead is continuous at exposed ends to prevent water infiltration.
5. Install preformed flashing over horizontal joints before vertical joints. Cut ends of horizontal joints so that the horizontal joint flashing extend under the vertical joints flashing (to be installed after) 1/4 inch.

F. Exterior Window Glazing/Frames/Flashing:

1. If existing glazing gasket is severely deteriorated, trim as required. Otherwise, leave existing gaskets intact. Reinstall any gaskets that may be loose or displaced from window frames.
2. Clean surfaces as specified.
3. Apply a fillet bead of silicone sealant between the metal window stops and adjacent glass surfaces. The fillet bead is to be continuously formed on all sides of each lite, providing two-sided adhesion between glass and metal frames. Use masking tape as needed to maintain an even and uniform sealant bead along glass site lines.
4. Apply silicone sealant at each exterior window frame and metal flashing joint to provide a continuous, weathertight seal. Adjust sealant bead sizes corresponding to the size of the underlying joint.
5. Apply bond breaker tape over working joints prior to sealant application.
6. Do not seal weep holes, unless noted otherwise or advised.
7. Apply silicone sealant over existing screw fastener heads in the window frame.

G. Outdoor Lights, Signs, and Wall Penetrations: Provide weathertight application of new elastomeric sealant at all other conditions and penetrations through exterior walls.

3.04 FIELD QUALITY CONTROL

A. Make provision to assist and coordinate progress reviews of the work by the Consultant.

B. During project sealant application, test adhesion of exterior perimeter sealant joints at 30%, 60%, and 90% sealant completion. Three weeks after installation, cut a tab on a joint and test adhesion. Patch test areas in accordance with manufacturer™™s instructions. If application is not acceptable to the Consultant, conduct additional test as directed by the Consultant.

C. Remove excess sealant or other soiling due to caulking operations on adjacent surfaces as the work progresses by methods and materials approved in writing by manufacturers of joint sealants.

3.05 ADJUSTING AND CLEANING

A. Clean site of all unused materials and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of the work of this Section.

C. Repair, restore, or replace all materials, landscaping, interior finishes, and surfaces damaged by the Work to the satisfaction of the Owner at no additional expense.

3.06 PROTECTION

A. Protect sealed joints from being disturbed or contaminated for a minimum of 48 hours, unless more stringent requirements apply.

END OF SECTION 07922

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SECTION 09960

HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Work for this Section includes furnishing all labor, materials, equipment, and services to prepare and paint existing steel components.

B. Work for this Section includes the following:

1. Prepare and paint corroded areas of existing steel wall system components.

C. All new materials are to be interfaced with, and integrated into, existing materials to provide completed work that is sound and weathertight.

1.02 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Paint Removal and Application:

1. Basis of Measurement: By the square foot, computed on the basis of rectangular solid shapes approximating the actual shape of paint removed and replaced.
2. Basis of Payment: Includes removals, surface preparation, and paint application.

1.03 REFERENCES

A. References are latest editions, unless otherwise indicated.

B. American Society for Testing and Materials (ASTM):

1. ASTM D 16: Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products.

C. The Society for Protective Coatings (SSPC):

1. SSPC: Steel Structures Painting Manual.

D. Local, state or federal laws and regulations governing Volatile Organic Compounds (VOC) in paint or paint products.

E. Local, state, or federal laws and regulations governing paint removal.

1.04 SUBMITTALS

A. Product Data, certifications, and manufacturer's written preparation and application instructions for the specified materials.

1.05 QUALITY ASSURANCE

A. Contractor Qualifications: Not less than five (5) current years relevant successful experience with comparable projects and employing personnel skilled in the Work specified in this Section. The skilled person shall have at least five (5) years of experience and shall have successfully completed at least two (2) projects within the past three (3) years involving quantities and complexities similar to those required under this Section.

B. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years documented experience.

C. Source of Materials: Obtain materials from a single source for each type required, to ensure uniform quality, color, match, and texture.

D. Field Samples:

1. Five (5) lineal feet of existing steel cleaned and ready for coating applications.
2. Five (5) lineal feet of existing steel cleaned with coating applied.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer’s name, type of coating, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45°F and maximum of 90°F, in ventilated area, and as required by manufacturer’s instructions.

1.07 PROJECT CONDITIONS

A. Protect elements surrounding the Work from damage or disfiguration.

B. Provide adequate ventilation to remove material fumes as required to provide a safe area for work, and to confine and control fumes from migrating to adjacent areas.

C. All paint and thinner containers shall remain closed until required for use and shall be stored in areas with temperature ranges required by paint product manufacturer. All paint shall be mechanically mixed before use, in accordance with the manufacturer's directions. Agitation during application must be provided where specified by the manufacturer.

D. The Contractor shall provide adequate supervision of the Work at all times. The Owner's Representative and Consultant shall have access to all work, in the shop or at the job site, to ensure that the surface preparation, application, and all aspects of the Work are being done according to the Specifications.

E. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.

1.08 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are the products and materials for the specified work. Provide all incidental items and materials required to complete the Work in accordance with these documents.

2.02 STEEL COMPONENTS

A. Primer Coating

1. Urethane-based, zinc rich primer.
   a. Tnemec Series 135 Chembuild by Tnemec Company Inc.; Color - White

B. Top Coat

1. Acrylic polyurethane top coat, as recommended by the primer manufacturer.
   a. Endura-Shield Series 73 by Tnemec Company Inc.; Color - Black

PART 3 - EXECUTION

3.01 EXAMINATION

A. The Owner and Consultant have the right to determine and inspect surfaces and approve just prior to each coat. The Owner and Consultant shall require Contractor to touch up any scars, abrasions, or holidays in any coating before application of the next coat.

B. Inspection of work preparation, work in progress, and completed work shall be performed by the Consultant as follows:

1. Approval of dry film thickness per coat in accordance with Specification and manufacturer's written recommendations.
2. Approval of any deviations from the established Specification, when required by job schedule, if approved by Owner and Consultant.

C. Contractor shall inspect surfaces to which coating will be applied and report immediately in writing to the Consultant any conditions detrimental to the proper execution of this work. Absence of such notification will constitute the Contractor's acceptance of existing conditions.

D. The Contractor shall determine whether the air and surface temperature are suitable for application of paint. Paint and surface to which it is to be applied should be the same temperature.

3.02 PREPARATION - STEEL SURFACES

A. Clean all steel surfaces removing scaling and rust.

B. Prepare existing deteriorated steel surface to receive coating in accordance with paint manufacturer's recommendations and with The Society for Protective Coatings (SSPC) as follows:

1. SP-2, "Hand Tool Cleaning".
2. SP-3, "Power Tool Cleaning".
3. SP-6, "Commercial Blast Cleaning".

C. Inspect the condition of the exposed steel sections and connections (anchors and welds). Where the section loss of the steel member and/or connections is greater than 10 percent of the nominal thickness, report to the Consultant for review and corrective procedure (if any). Do not proceed with the coating work without written notification from the Consultant.

1. Primer: 3 mils (dry) / 5 mils (wet).
2. Top Coat: 2.5 mils (dry) / 4.5 mils (wet).

3.03 APPLICATION - STEEL COMPONENTS

A. When surfaces are prepared as noted above, apply coating as described in the manufacturer's written application instructions and as determined during the field sample applications.

B. Mix coating components following the manufacturer's written instructions.

C. Apply coating to a thickness of: 3 mils (dry)/5 mils (wet). Maintain coating thickness within the manufacturer™™s published maximum and minimum thickness ranges.

D. If additional coats are required to obtain the required coating thickness, apply additional coats after the initial coat is completely dried/cured.

3.04 FIELD QUALITY CONTROL

A. Contractor shall maintain or exceed levels of workmanship and material acceptability in regard to surface preparation and installation as established by the field samples.

B. Contractor shall employ trained, skilled and experienced craftsmen for all phases of the Work.

C. Contractor shall make provision to assist and coordinate monitoring of the Work by the Manufacturer and Owner Representatives.

3.05 ADJUSTING AND CLEANING

A. Clean site of all unused materials and waste in accordance with environmental regulations.

B. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of the Work of this Section.

C. Repair, restore, or replace all materials, landscaping, interior finishes, and surfaces damaged by the Work to the satisfaction of the Owner at no additional expense.

D. Collect waste material which may constitute fire hazard, place in closed metal containers and remove daily from site.

E. Remove all masking tape used to cover adjacent building components.

END OF SECTION 09960

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SECTION 09965

ELASTOMERIC COATINGS

PART 1 - GENERAL

1.01 SUMMARY

A. Provide all labor, materials, equipment and incidentals necessary to perform required scope of work on existing substrate as specified herein.

B. Work for this section includes:

1. Provide new elastomeric coating system to concrete surfaces.
2. Provide new elastomeric coating to stucco surfaces.
3. Provide new coating to transite surfaces.

C. Application of coatings shall only be to surfaces that are structurally sound and have been properly prepared in accordance with manufacturer's requirements. All preparatory work shall include approval by manufacturer's representative, concrete repairs and cleaning prior to application of coating system.

D. All new materials are to be interfaced with, and integrated into, existing materials in a manner that provides an aesthetically acceptable and completely weathertight system.

1.02 REFERENCES

A. Steel Structures Painting Council (SSPC):

1. SSPC – SP2, Hand Tool Cleaning
2. SSPC – SP3, Power Tool Cleaning
3. SSPC – SP7, Brush-Off Blast Cleaning
4. SSPC – SP12, Surface Preparation By Water Jetting

B. Local, state or federal laws and regulations governing Volatile Organic Compounds (VOC) in paint or paint products.

C. Local, state, or federal laws and regulations governing paint removal.

1.03 PERFORMANCE REQUIREMENTS

A. Provide elastomeric coatings that comply with performance requirements specified in MPI 113.

B. Provide elastomeric coating systems with following properties as determined by test methods indicated:

1. Elongation: Not less than 100 percent with a tensile strength of 200 psi and not less than 88 percent recovery after 1 hour and 90 percent recovery after 24 hours when tested according to ASTM D 2370 using parameters established by MPI 113.
2. Accelerated Weathering: No cracking, peeling, blistering, chalking, or visual deterioration after 1000 hours when tested according to procedures in ASTM G 155.
3. Low-Temperature Flexibility: No crack formation when tested according to ASTM D 1737.
4. Moisture-Vapor Transmission: Not less than 2.0 perms according to ASTM D 1653.
5. Wind-Driven Rain Resistance: No water penetration according to procedures in FS TT-C-555 at 95 mph.
6. Minimum Solids Content by Volume: Not less than 50.1 percent.
7. Volatile Organic Content (VOC): Not less than 55 g/L according to ASTM D 3960.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site intact and unopened in manufacturer's original sealed containers with labels identifying manufacturer, product name, batch number, lot numbers, and shelf life when applicable. Material Safety Data Sheets and product data sheets with application instructions for each product shall accompany all shipments.

B. Store approved materials in accordance with manufacturer's instructions. As a minimum comply with following:

1. Store all materials off ground under watertight cover and away from sweating walls and other damp surfaces.
2. Immediately remove damaged or deteriorated materials from job site.
3. Keep records of quantities and batch numbers of materials stored.
4. Use necessary means to ensure safe storage and use of materials, as well as prompt and safe disposal of waste.
5. All coating and thinner containers shall remain closed until required for use and shall be stored in areas with a temperature between 50°F and 90°F.

C. Personnel shall be warned against prolonged breathing of vapors and contact of materials with skin or eyes. Keep products away from heat, sparks, and flame. Do not allow uses of spark producing equipment such as switches, appliances, etc. during application or until vapors are gone.

1.05 PROJECT CONDITIONS

A. Environmental Requirements:

1. Comply with manufacturer's requirements for environmental conditions under which systems can be applied.
2. Do not apply coating in areas where dust is being generated.
3. Do not apply coating in snow, rain, fog, or on damp/wet surfaces.
4. Coating application may be continued during inclement weather if areas and surfaces are enclosed and within temperature limits specified by manufacturer during application and drying periods.

B. Close and seal all heat and ventilation ducts as required to prevent contamination and intake of fumes inside building. Where ducts cannot be closed, as determined by Owner, provide filtering media for duct and fumes.

C. All coating shall be mechanically mixed before use, in accordance with Manufacturer's directions. Agitation during application must be provided where specified by manufacturer.

D. Coating shall be done by skilled painters and/or qualified apprentices directed by same. Manufacturer's instructions regarding application shall be followed. Criteria of good workmanship desired shall be proper surface preparation in accordance with these Specifications, a neat appearance of finished surfaces and absence of ridges, sags, runs, drops, laps, and unnecessary brush marks. Other criteria are thorough mixing of coating, limited use of thinners, uniformity of film thickness, removal of dust, grease, and other foreign matter, conservation of coating materials, proper drying time between coats, and protection of surfaces not to be coated.

E. Contractor shall provide adequate supervision of work at all times. Owner or his representative shall have access to all work, in shop or at job site, to ensure that surface preparation, application, and all aspects of work are being done according to Specifications.

F. Care must be taken to prevent intercoat contamination, particularly from industrial fallout, over spray of coating, greasy hands, oil mists, and like. If contamination does occur, proper cleaning must be used, and finish coated as soon as surface is dry.

G. Protect finished surfaces from rain, dirt, dust, and work of other trades for not less than 48 hours.

H. Provide "Wet Paint" signs to protect newly coated finishes.

1.06 WARRANTY

A. Reference Section 01780 - Project Closeout and Warranties.

PART 2 - PRODUCTS

2.01 GENERAL

A. Listed are products and materials for specified work. Provide all incidental items and materials required to complete Work in accordance with these documents.

B. A single manufacturer's products are referred to for identification. Products of other listed manufacturers meeting requirements itemized below may be submitted for approval. Contractor shall bear full cost of review of alternate systems by consultant, including fees, expenses, travel to review previous products, etc., regardless of outcome or determination. Unless approved by consultant, obtain waterproofing system materials from same manufacturer. Check all specified items upon contract signing and order early so that work is not delayed. Certain materials may require considerable lead time for delivery.

C. Coatings shall be measured in terms of mil thickness (0.001"). Total dry mil thickness shall not be less than called for. If total dry film coating thickness required is not obtained by use of number of coats shown, additional coats shall be applied until specified total is provided. Recoating will take place within time limits specified by manufacturer representative.

D. All coats shall be applied in such a manner as to produce a film of uniform smoothness. Special attention shall be paid to crevices, rivet lines, bolt heads, corners, edges, etc., to obtain required thickness.

2.02 MATERIALS

A. Acrylic Elastomeric Coating

1. Type: Single component, high-build, elastomeric, 100% acrylic coating with high elongation, high vapor permeability, and hairline crack bridging characteristics.
2. Acceptable Products
   a. Sika Thorolastic 750 / Sika
   b. Sikagard 515 Elastomeric / Sika
3. Dry Film Thickness: Provide in accordance with manufacturer's instructions and as required for warranty. As a minimum, elastomeric coating is to be applied in two coats to attain not less than 12 mils dry thickness.
4. Color: To match existing surfaces, or as selected and approved by Owner. Base coat shall be one shade lighter than finish coat. Finish coat will have a texture as approved by Owner.
5. Primer: Provide product required for existing surfaces and as recommended by coating manufacturer.

B. Asbestos (Transite) Encapsulant/Paint – Product: Fiberlock

C. Cleaners:

1. Materials used for cleaning shall be approved by coating manufacturer to ensure compatibility.
2. Pre-mixed, commercially available cleaner, specially prepared for use with spray equipment and cleaning, concrete surfaces.

2.03 ACCESSORIES

A. Tarps or polyethylene sheeting for protection of existing landscaping and building surfaces.

B. Masking tape: Pressure sensitive adhesive paper tape.

C. Shop Cloths: Use shop cloths or clean lint-free rags for cleaning operations.

D. Sealant for Coating System: Provide as recommended or required by coating manufacturer.

2.04 MIXING AND THINNING

A. Mix coating materials according to manufacturer's recommendations, to a homogenous consistency. Thoroughly disperse any coating solids that may have settled to bottom of container.

B. Do not thin coating materials.

C. Ensure uniform color of coating materials between batches.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Contractor shall be responsible for inspecting substrate and verifying that no conditions are present which may prevent or otherwise interfere with installation of proposed elastomeric coating or with obtaining required manufacturer's warranty.

B. Inspect surfaces for following:

1. Contamination including: algae, dirt, dust, efflorescence, form oil, fungus, grease, laitance, mildew or other foreign substances.
2. Surface absorption and chalkiness.
3. Cracks: Measure crack width and record location of cracks.
4. Damage and deterioration.
5. Moisture content and moisture damage: Use a moisture meter to determine if surface is dry enough to receive coatings and record any areas of moisture damage.

C. Report in writing any adverse conditions which might affect performance of coating to Consultant within three (3) calendar days. Absence of such notification shall constitute Contractor's verification that existing conditions will allow installation of system in accordance with plans and specifications, as well as manufacturer's requirements and recommendations.

D. Before ordering materials or performing work, obtain and verify all measurements at project site. Exact measurements are Contractor's responsibility.

3.02 PREPARATION

A. General:

1. Repair, patch, and fill all cracks, voids, defects, and damaged areas in existing surfaces. Allow repair materials to cure completely before application of coating product.
2. Perform sealant work specified in Section 07920 – Joint Sealants prior to coating application. Do not coat joint sealants unless compatibility is demonstrated by adhesion testing and approved by Consultant. Provide masking as required to prevent application of coating onto joint sealants and all non-coated surfaces.
3. Remove old coating, caulking, sealers, roofing tar, dust, dirt, oils, grease, laitance, efflorescence, mildew, fungus, and any other materials that may inhibit adhesion of coating product. Clean exterior surfaces by using a low-pressure water/ detergent cleaning procedure.
4. Remove or protect signs, outlets, lighting fixtures, windows, doors, landscaping, roofs, vehicles, and other adjacent surfaces at Project. Cleaning or replacement of existing surfaces due to inadequate protection is Contractor's responsibility.
5. Coordinate temporary shutdown and protection at air intake ducts/vents with Owners Representative to prevent objectionable fumes from entering interior.

B. Cracks:

1. Static cracks up to 1/16" generally can be bridged by elastomeric coating with a heavy-brush application. Verify with coating manufacturer.
2. Static cracks over 1/16" wide and all dynamic cracks/joints require proper repair and joint sealant application, in accordance with appropriate substrate Section in this specification.

3.03 APPLICATION

A. Verify that existing surfaces have been repaired, cleaned, and are dry before proceeding.

B. Labels: Do not coat over any code-required labels or equipment name, identification, performance rating or nomenclature plates.

C. Apply coating products by roller, brush, or spray equipment, as recommended by manufacturer for specific project substrates and conditions, following manufacturer’s written specifications and as determined by test samples.

D. Maintain minimum (and maximum) thickness of each coat. Apply additional coats as required to obtain minimum total system thickness.

E. Allow primer / coating to dry / cure for a minimum of 12 hours, or as recommended by manufacture (if longer). Allow additional time as required to account for current ambient temperature, surface temperature, and relative humidity at time of application.

F. Apply coating to entire area in a continuous application, always working to a wet edge to eliminate cold joints.

G. Back Rolling: Backroll all final coat applications (regardless of application method). Backrolling shall be performing in same direction for entire project to prevent differences in appearance.

H. All finished coating applications must match approved samples for color, texture, coverage, and be free of pinholes to ensure waterproofing performance.

3.04 ADJUSTING AND CLEANING

A. Clean site of all unused materials, residues, and waste in accordance with environmental regulations.

B. Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

C. Remove and dispose of all materials used to protect surrounding areas and building surfaces, following completion of work of this section.

D. Repair, restore, or replace all materials, landscaping, and surfaces damaged by coating product to satisfaction of Owner at no additional expense.

END OF SECTION 09965

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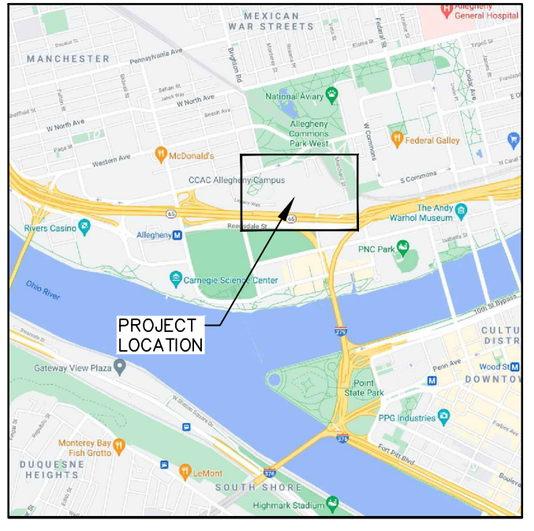
2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE.
PITTSBURGH, PA 15212

SITE PLAN:

INDEX OF DRAWINGS:

PROJECT LOCATION MAP:



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COVER PAGE

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

REVISIONS / ADDENDA:	
OWNERS REVISION: 11/14/24	
SCALE:	N.T.S.
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST–0.0

RESTORATION NOTES

R1 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.1 AND RST–4.2, AT ALL VERTICAL CONCRETE SURFACES, PROVIDE CRACK REPAIRS AND PATCH REPAIRS AT SPALLED OR DELAMINATED AREAS AS REQUIRED; IN ADDITION, PROVIDE RESTORATION CLEANING AND NEW ELASTOMERIC COATING APPLICATION.

R2 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.0, AT DESIGNATED BRICK MASONRY WALL AREAS, PROVIDE 100% REPOINTING OF MORTAR JOINTS, BRICK REPLACEMENT AS REQUIRED, AND RESTORATION ANCHOR INSTALLATION AS REQUIRED; IN ADDITION, PROVIDE RESTORATION CLEANING AND WATER REPELLANT APPLICATION ON ALL BRICK MASONRY.

R3 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.0, AT DESIGNATED BRICK MASONRY WALL AREAS, PROVIDE REPOINTING OF MORTAR JOINTS AS REQUIRED, BRICK REPLACEMENT AS REQUIRED, AND RESTORATION ANCHOR INSTALLATION AS REQUIRED; IN ADDITION, PROVIDE RESTORATION CLEANING.

R4 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–3.0 THRU RST–3.4, AT DESIGNATED WING WALL BAYS, REMOVE AND REPLACE BRICK MASONRY VENEER WALL, REMOVE AND REPLACE TOP THREE BRICK COURSES (FULL–DEPTH) ON WING WALL, PROVIDE ADDITIONAL BRICK REPLACEMENT AS REQUIRED, PROVIDE 100% REPOINTING OF MORTAR JOINTS ON ORIGINAL BRICK MASONRY TO REMAIN, REMOVE ALL EXISTING THROUGH–WALL FLASHINGS, PROVIDE 100% REPOINTING OF MORTAR JOINTS AT CMU BACK–UP WALL, PROVIDE NEW FLUID–APPLIED AIR BARRIER SYSTEM ON CMU BACK–UP WALL, PROVIDE NEW THROUGH–WALL FLASHING SYSTEM AT BASE OF NEW BRICK VENEER WALL AND PROVIDE JOINT SEALANTS AS REQUIRED; IN ADDITION, PROVIDE RESTORATION CLEANING AND WATER REPELLANT APPLICATION ON ALL BRICK MASONRY.

R5 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–3.0 THRU RST–3.4, AT DESIGNATED BAY RETURNS, REMOVE AND REPLACE BRICK MASONRY VENEER WALL, REMOVE ALL EXISTING THROUGH–WALL FLASHINGS, PROVIDE 100% REPOINTING OF MORTAR JOINTS AT CMU BACK–UP WALL, PROVIDE NEW FLUID–APPLIED AIR BARRIER SYSTEM ON CMU BACK–UP WALL, PROVIDE NEW THROUGH–WALL FLASHING SYSTEM AT BASE OF NEW BRICK VENEER WALL AND PROVIDE JOINT SEALANTS AS REQUIRED; IN ADDITION, PROVIDE CLEANING AND WATER REPELLANT APPLICATION ON NEW BRICK MASONRY.

R6 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–3.0 THRU RST–3.4, AT DESIGNATED WING WALL RETURNS, REMOVE AND REPLACE BRICK MASONRY VENEER WALL, REMOVE AND REPLACE BRICK MASONRY WING WALL (FULL–DEPTH), REMOVE ALL EXISTING THROUGH–WALL FLASHINGS, PROVIDE 100% REPOINTING OF MORTAR JOINTS AT CMU BACK–UP WALL, PROVIDE NEW FLUID–APPLIED AIR BARRIER SYSTEM ON CMU BACK–UP WALL, PROVIDE NEW THROUGH–WALL FLASHING SYSTEM AT BASE OF NEW BRICK VENEER WALL AND PROVIDE JOINT SEALANTS AS REQUIRED; IN ADDITION, PROVIDE CLEANING AND WATER REPELLANT APPLICATION ON NEW BRICK MASONRY.

R7 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.0, AT ALL BRICK MASONRY PARAPET WALLS, REMOVE AND REPLACE OUTER WYTHE OF BRICK MASONRY AT THE TOP FOUR COURSES AND PROVIDE JOINT SEALANTS AS REQUIRED; IN ADDITION, PROVIDE CLEANING AND WATER REPELLANT APPLICATION ON NEW BRICK MASONRY.

R8 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.2, AT ALL CONSTRUCTION, EXPANSION, AND CONTROL JOINTS IN EXTERIOR WALLS, REPLACE JOINT SEALANTS.

R9 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.2, AT ALL EXTERIOR WALL OPENING PERIMETERS (WINDOWS, LOUVERS, ETC), REPLACE JOINT SEALANTS.

R10 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.2, AT ALL GLAZING JOINTS (METAL–TO–GLASS), PROVIDE SILICONE SEALANT "WET–SEAL"; IN ADDITION, AT ALL SEAMS AND JOINTS IN WINDOW FRAMES (METAL–TO–METAL), PROVIDE PRECURED SILICONE WEATHER–SEAL.

R11 IN ACCORDANCE WITH SPECIFICATIONS, AT ALL CURTAIN WALL BUTT–GLAZED JOINTS (GLASS–TO–GLASS), REPLACE JOINT SEALANT WITH NEW CLEAR SILICONE SEALANT WEATHER–SEAL.

R12 IN ACCORDANCE WITH SPECIFICATIONS, AT ALL STUCCO/PLASTER SOFFIT AREAS (UNDERSIDE OF PROJECTING BAYS), PROVIDE LOCALIZED REPAIRS TO DELAMINATED OR DETERIORATED AREAS; IN ADDITION, PROVIDE CLEANING AND NEW ELASTOMERIC COATING APPLICATION.

R13 IN ACCORDANCE WITH SPECIFICATIONS, AT ALL GLAZED–IN TRANSITE PANELS, PROVIDE CLEANING AND NEW COATING APPLICATION.

R14 IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS ON RST–4.1 AND RST–4.2, AT DESIGNATED EXTERIOR CONCRETE STAIR STRUCTURES (STEPS, LANDINGS AND GUARD–WALLS) ON SOUTH ELEVATION (FROM GRADE TO 2ND/ FLOOR LEVEL), PROVIDE CRACK REPAIRS AND PATCH REPAIRS AT SPALLED, DELAMINATED OR DETERIORATED AREAS AS REQUIRED.

R15 IN ACCORDANCE WITH SPECIFICATIONS, AT DESIGNATED EXTERIOR CONCRETE STAIR STRUCTURES ON SOUTH ELEVATION (FROM GRADE TO 2ND/ FLOOR LEVEL), PROVIDE NEW TRAFFIC COATING ON EXPOSED LANDING AREAS.

SCOPE OF WORK / PHASING NOTES:

- THE INTENT OF THIS PROPOSED WORK IS TO PERFORM THE "PHASE 1 SCOPE OF WORK" IN 2025 AND THE "PHASE 2 SCOPE OF WORK" IN 2026.
- ON THE ELEVATION DRAWINGS (RST–2.0 THRU RST–2.4), THE "PHASE 1 SCOPE OF WORK" INCLUDES ALL EXTERIOR WALL AREAS DELINEATED AND NOTED AS "PHASE 1".
- ON THE ELEVATION DRAWINGS (RST–2.0 THRU RST–2.4), THE "PHASE 2 SCOPE OF WORK" INCLUDES ALL EXTERIOR WALL AREAS DELINEATED AND NOTED AS "PHASE 2".
- RESTORATION NOTES R1, R8, R9, R10, R12 AND R13 APPLY TO ALL TYPICAL CONDITIONS ON THE EXTERIOR WALL AREAS IN PHASE 1 AND PHASE 2 AND ARE NOT USED ON THE ELEVATION DRAWINGS (RST–2.0 THRU RST–2.4).
- RESTORATION NOTES R4, R5, R6, R14, AND R15 APPLY ONLY TO "PHASE 1 SCOPE OF WORK".
- RESTORATION NOTE R11 APPLIES ONLY TO "PHASE 2 SCOPE OF WORK".
- ALL EXTERIOR WALL AREAS WILL REQUIRE VERTICAL ACCESS TO PERFORM THE PROPOSED WORK. CONTRACTOR WILL NEED TO PROVIDE DESIGN AND INSTALLATION SERVICES FOR PERMANENT OR TEMPORARY SAFETY ANCHOR POINTS.
- FOR EACH VERTICAL ACCESS LOCATION (IE: SUSPENDED SCAFFOLD DROP), CONTRACTOR WILL NEED TO PROVIDE ACCESS FOR CONSULTANT INSPECTION TIME; ASSUME TWO HOURS PER VERTICAL DROP LOCATION.

GENERAL NOTES:

1. PERFORM RESTORATION WORK IN CONFORMANCE WITH WRITTEN SPECIFICATIONS IN THE PROJECT MANUAL.
2. DRAWING AND DETAILS ARE PROVIDED FOR GENERAL ILLUSTRATION OF TYPICAL BUILDING CONDITIONS ONLY.
3. CONTRACTOR IS REQUIRED TO VERIFY ALL CONDITIONS, DIMENSIONS, AND DETERMINE QUANTITIES FOR SPECIFIED WORK PRIOR TO SUBMITTING A BID.

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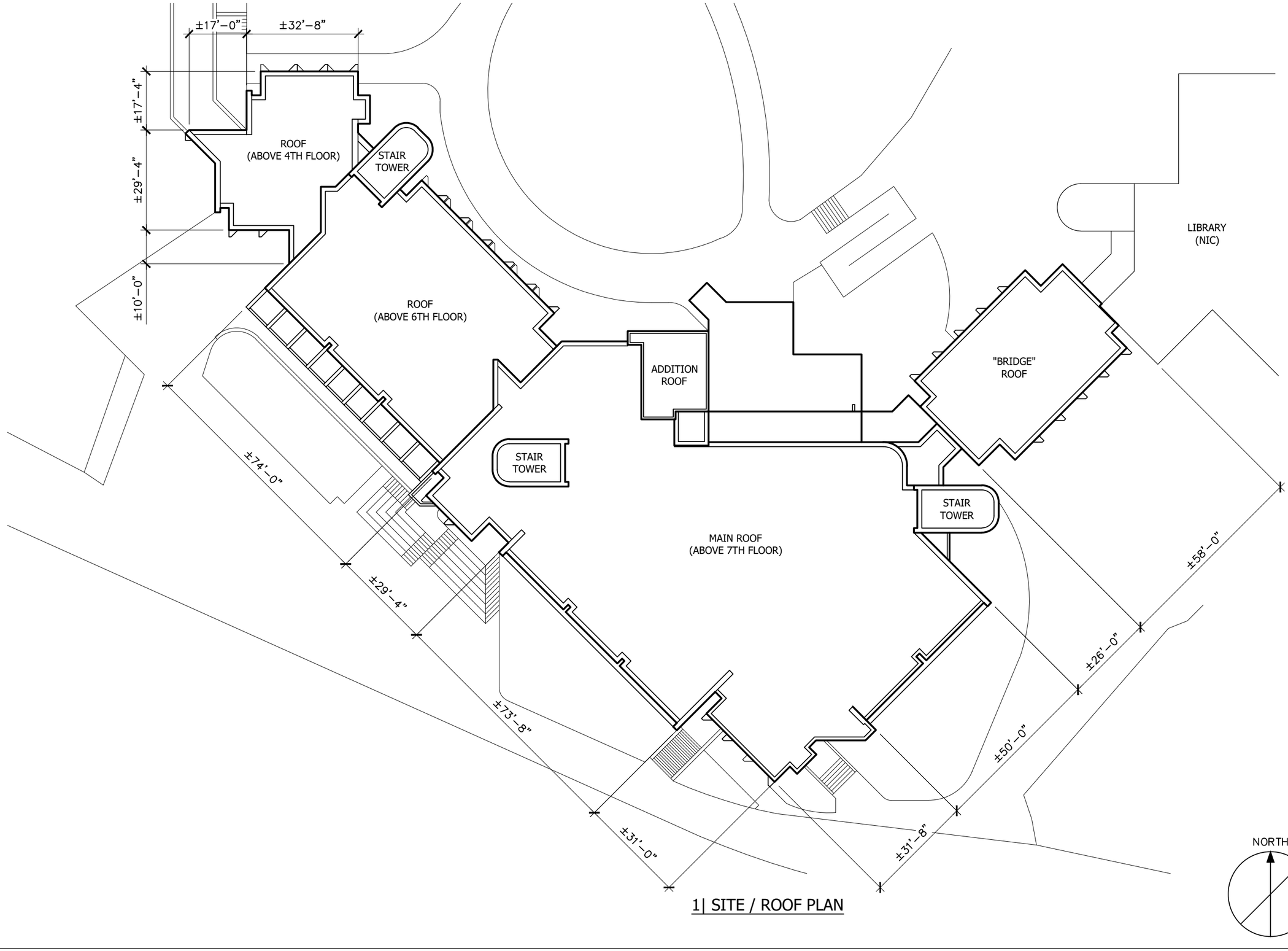
RESTORATION NOTES

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

REVISIONS / ADDENDA:	
OWNERS REVISION: 11/14/24	
SCALE:	N.T.S.
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST–0.1



1| SITE / ROOF PLAN

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SITE / ROOF PLAN

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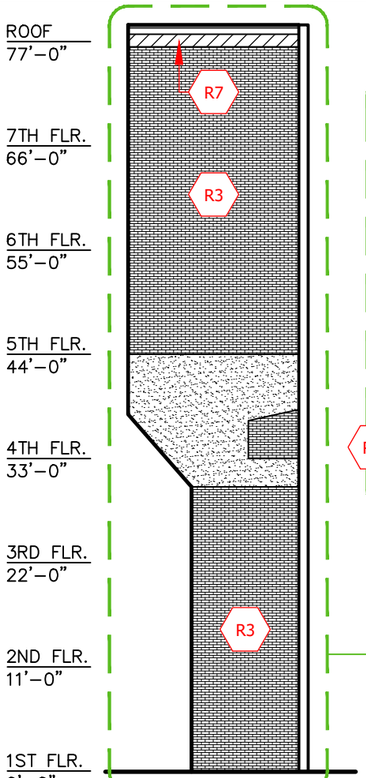
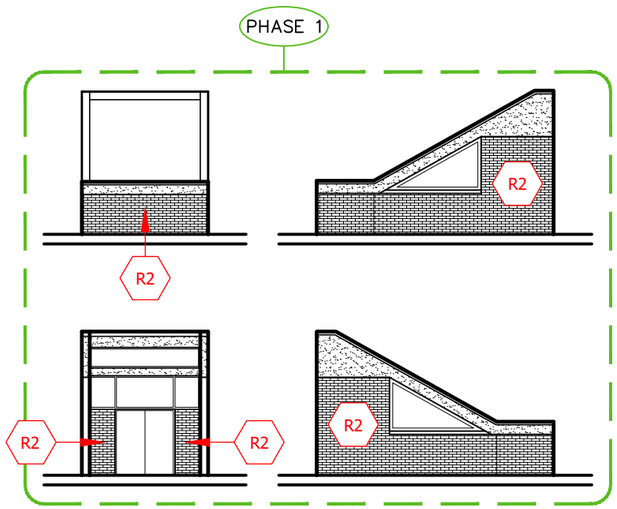
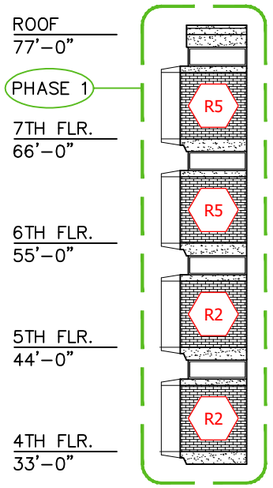


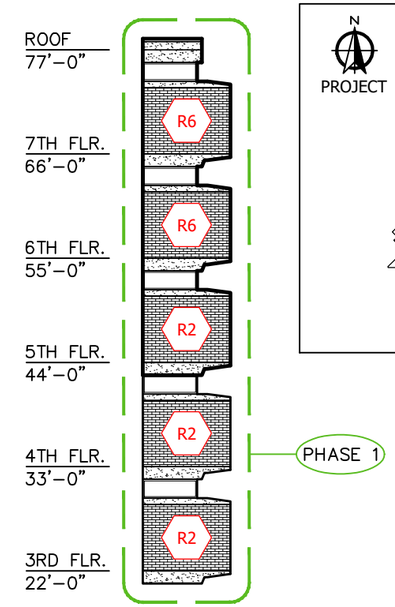
2| SOUTH ELEVATION - SIDE



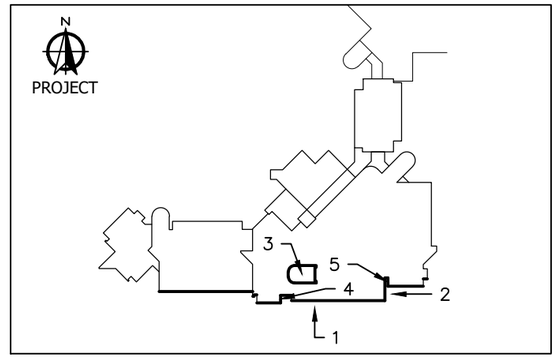
3| STAIR TOWER (ROOF LEVEL)



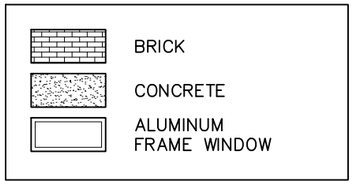
4| WING WALL BAY RETURN

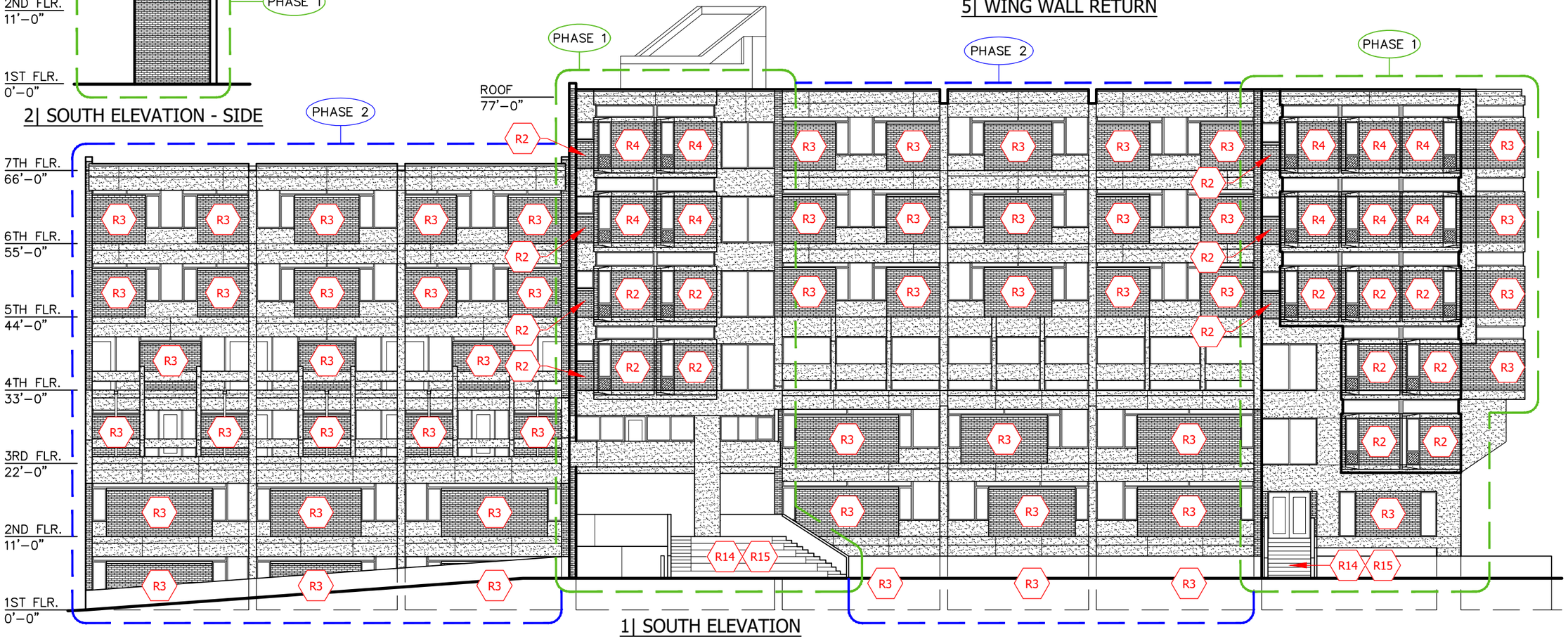


5| WING WALL RETURN



KEY PLAN





1| SOUTH ELEVATION

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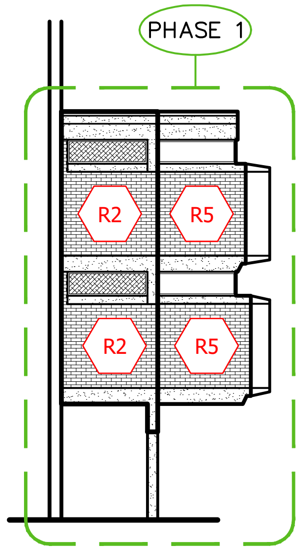
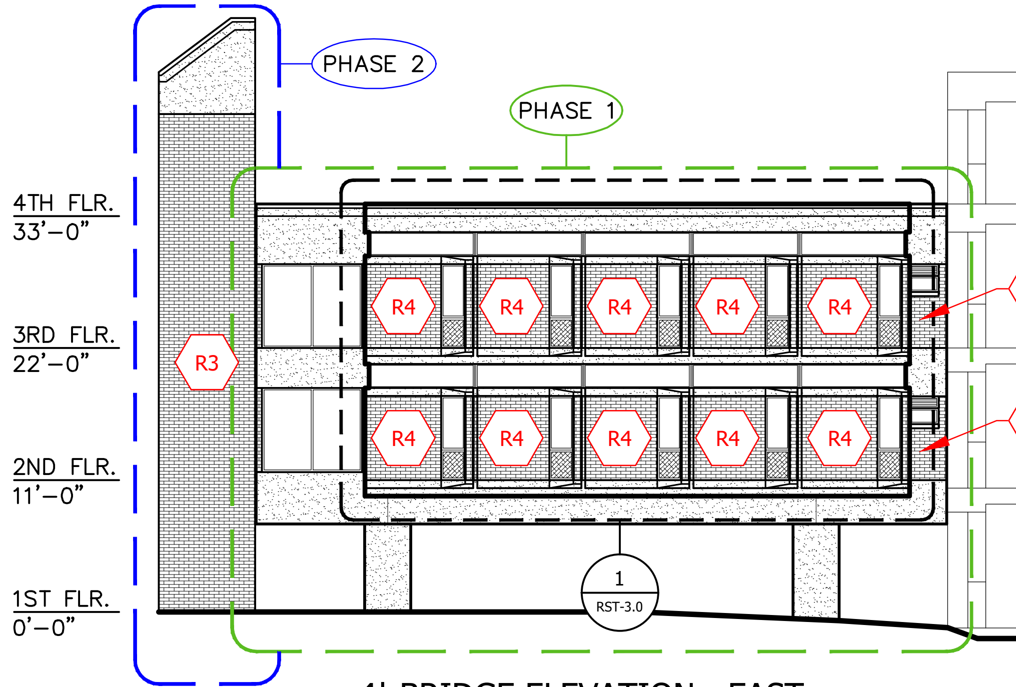
EXTERIOR ELEVATIONS

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

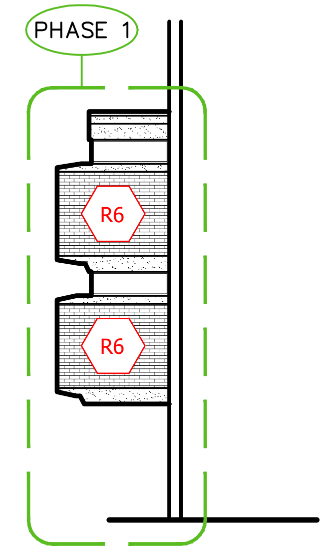
REVISIONS / ADDENDA:
OWNERS REVISION: 11/14/24
SCALE: N.T.S.
APPROVED BY: C.A.H.
DRAWN BY: R.M.K.F.
DATE: OCTOBER 2024
PROJECT NUMBER: T24069
DRAWING NUMBER: RST–2.0



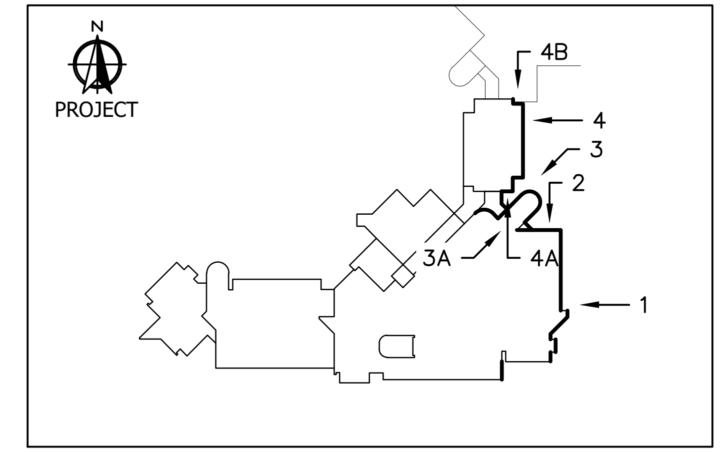
4A| BRIDGE ELEVATION - SIDE



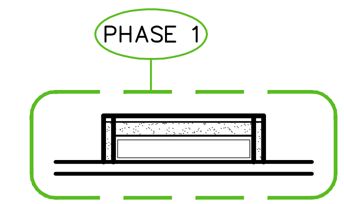
4| BRIDGE ELEVATION - EAST



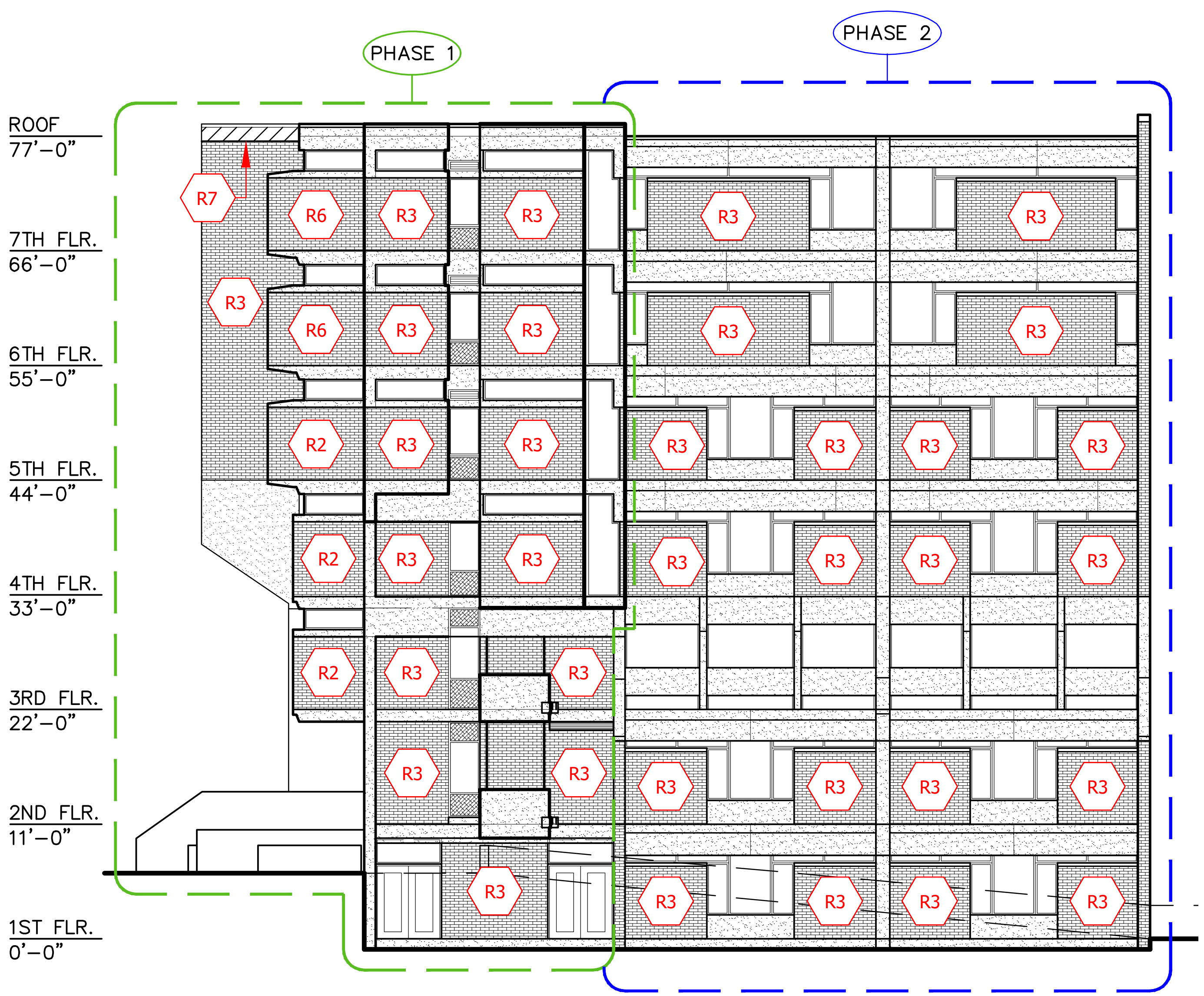
4B| BRIDGE ELEVATION - SIDE



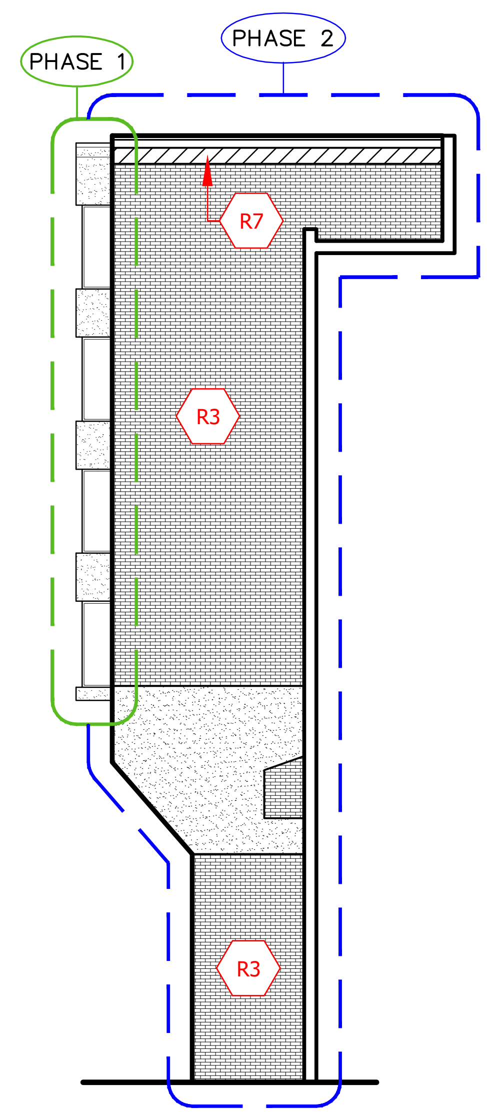
KEY PLAN



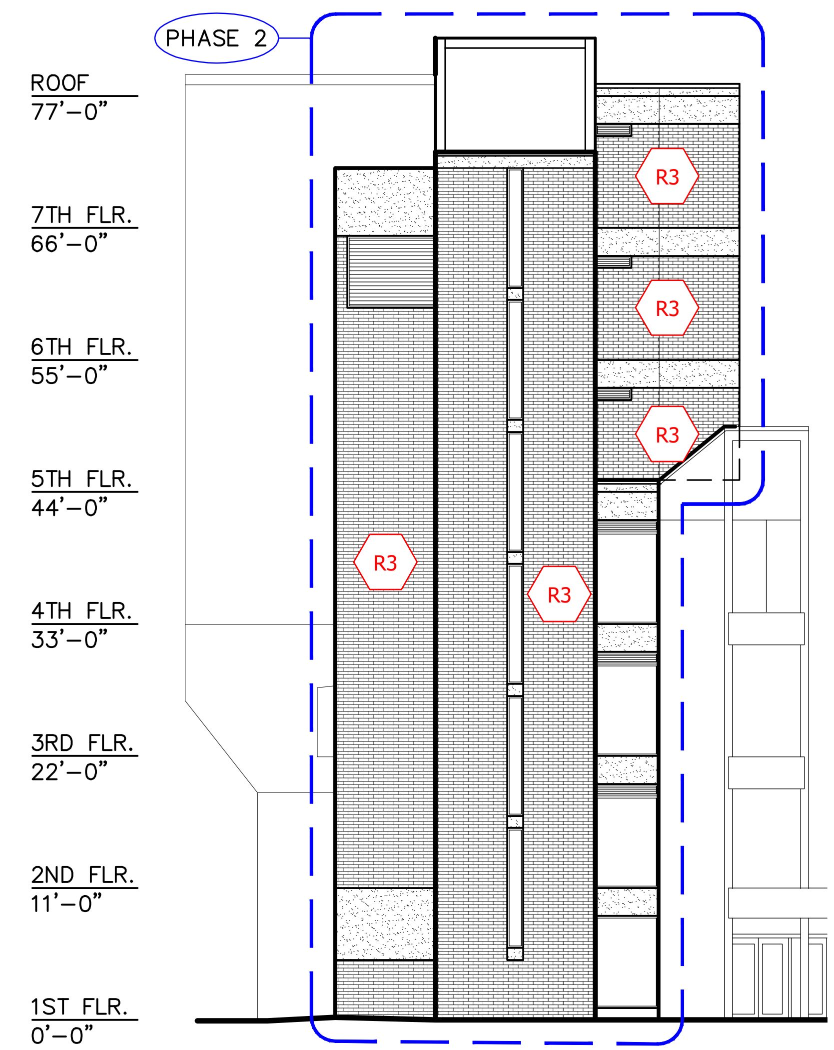
3A| BACK OF STAIR TOWER



1| PARTIAL EAST ELEVATION



2| EAST ELEVATION - SIDE



3| NORTHEAST ELEVATION

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EXTERIOR ELEVATIONS

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MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

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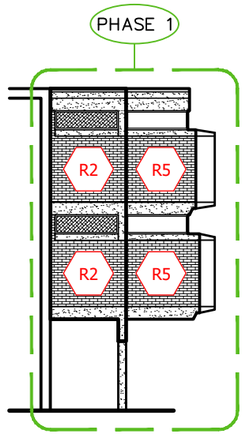
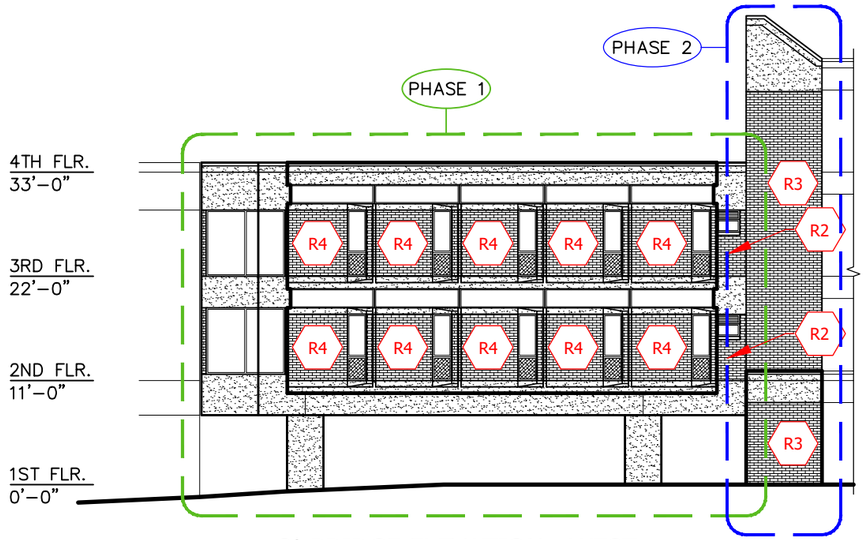
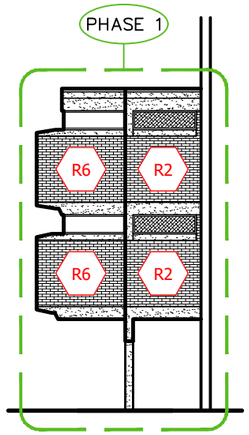


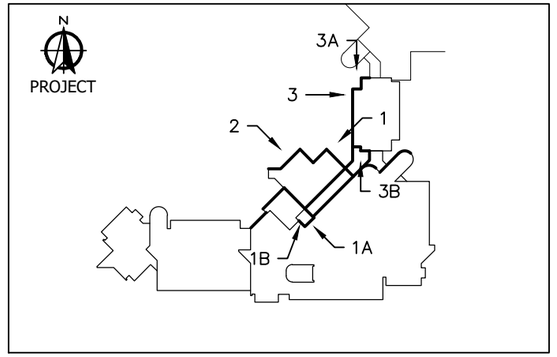
3A| BRIDGE ELEVATION - SIDE



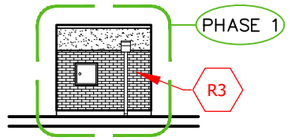
3| BRIDGE ELEVATION - WEST



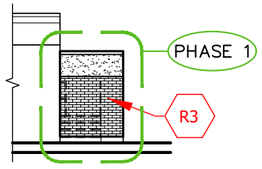
3B| BRIDGE ELEVATION - SIDE



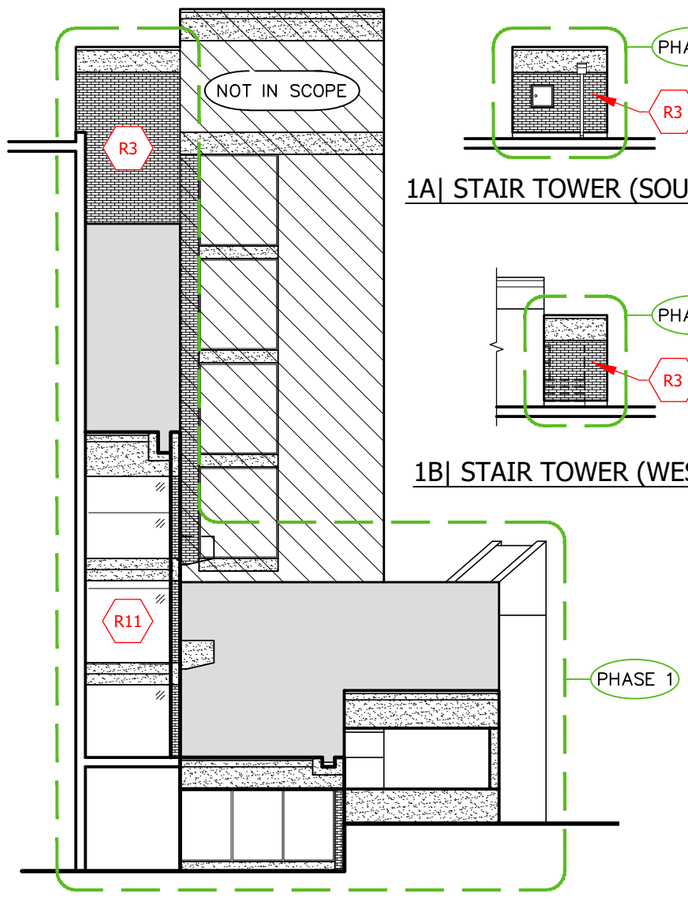
KEY PLAN



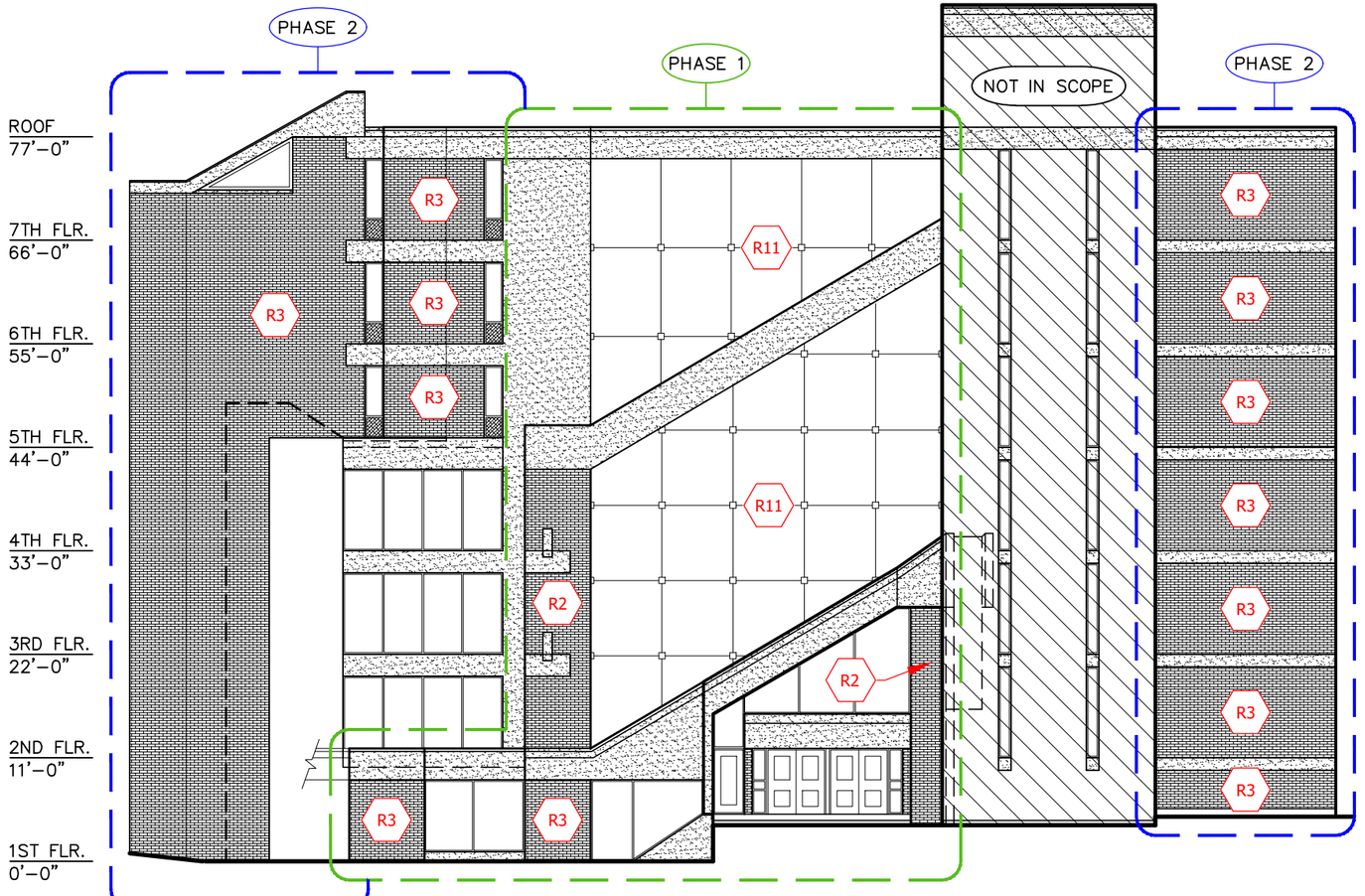
1A| STAIR TOWER (SOUTH)



1B| STAIR TOWER (WEST)



1| NORTH ELEVATION (EAST SIDE)



2| PARTIAL NORTH ELEVATION

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EXTERIOR ELEVATIONS

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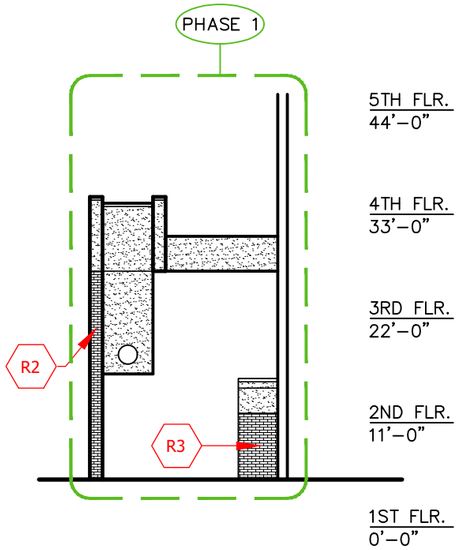
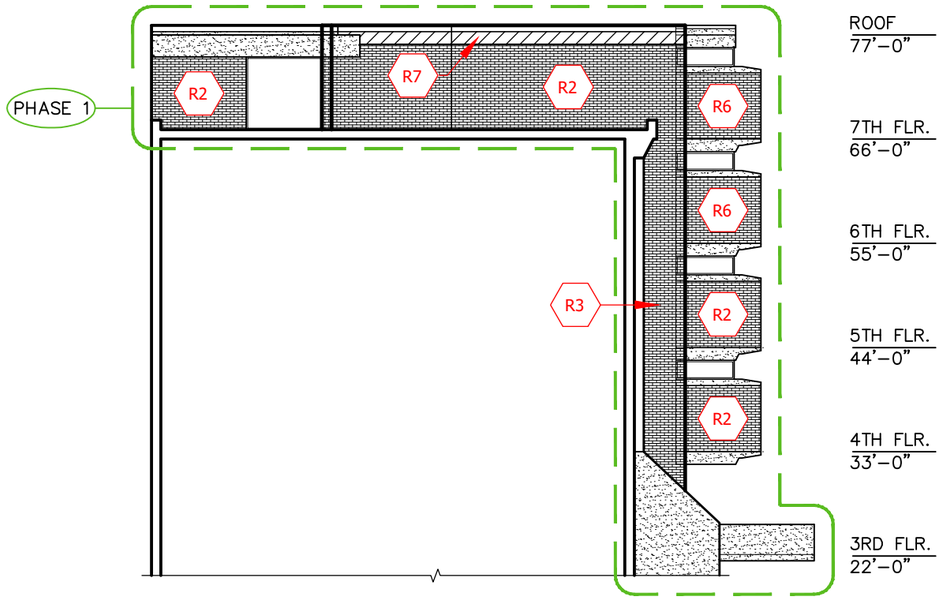
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

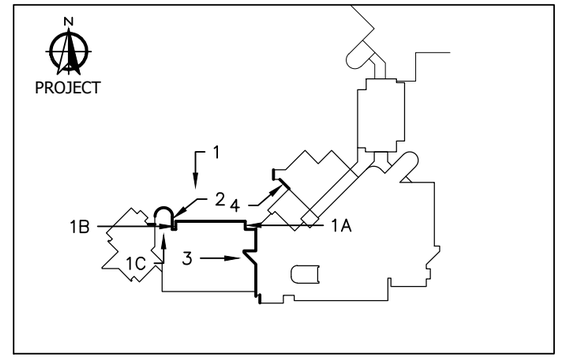
REVISIONS / ADDENDA:
OWNERS REVISION: 11/14/24
SCALE: N.T.S.
APPROVED BY: C.A.H.
DRAWN BY: R.M.K.F.
DATE: OCTOBER 2024
PROJECT NUMBER: T24069
DRAWING NUMBER: RST-2.2



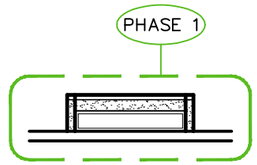
4| WEST ELEVATION - NORTH ENTRANCE



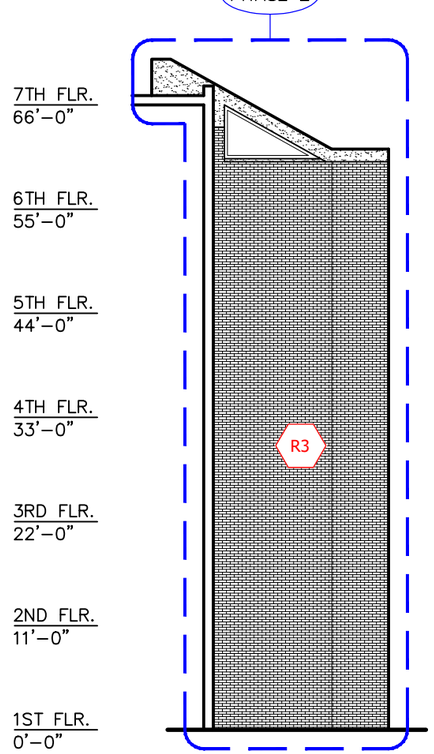
3| WEST ELEVATION - AT HIGH ROOF



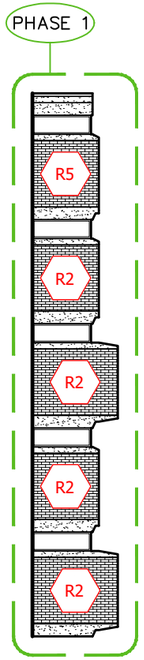
KEY PLAN



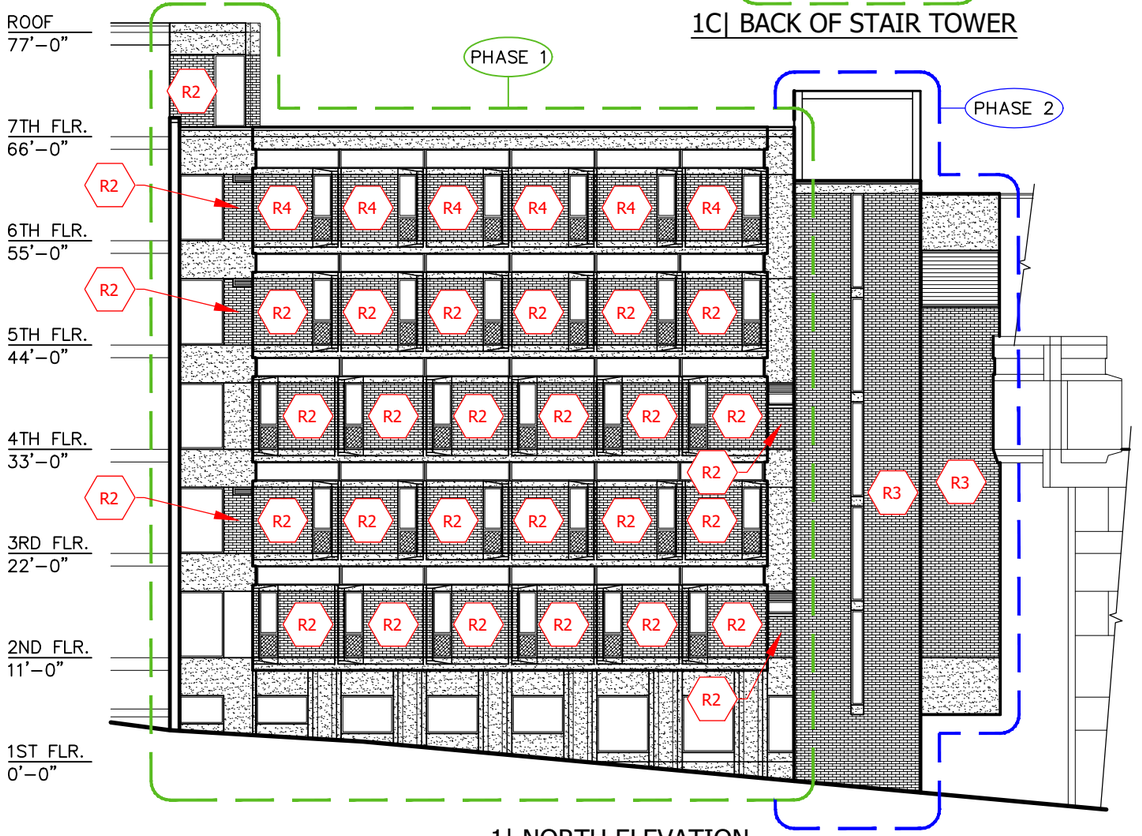
1C| BACK OF STAIR TOWER



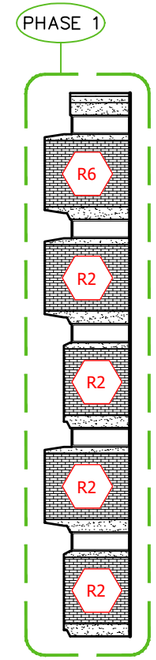
2| STAIR TOWER - WEST ELEVATION



1A| SIDE ELEVATION



1| NORTH ELEVATION



1B| SIDE ELEVATION

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EXTERIOR ELEVATIONS

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

REVISIONS / ADDENDA:	
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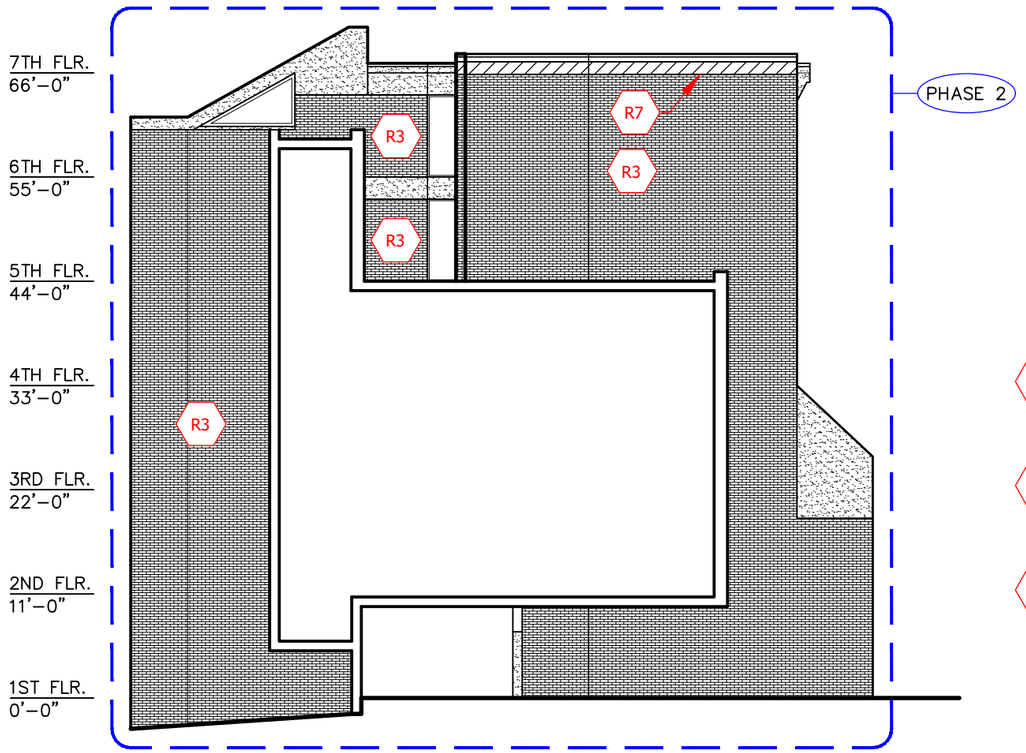
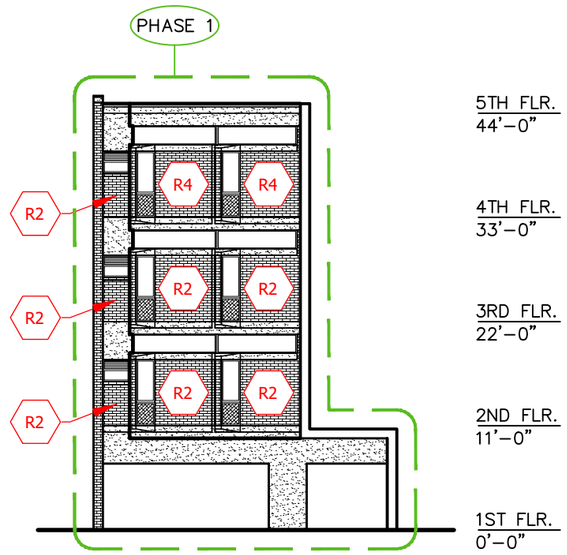
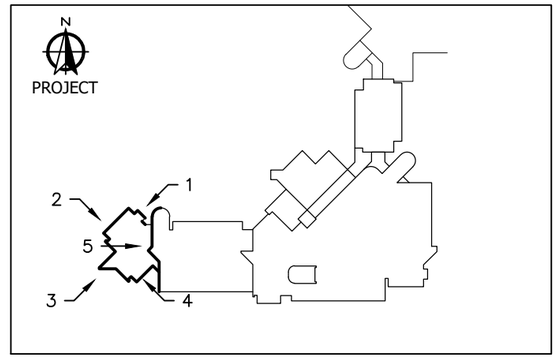
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST–2.3



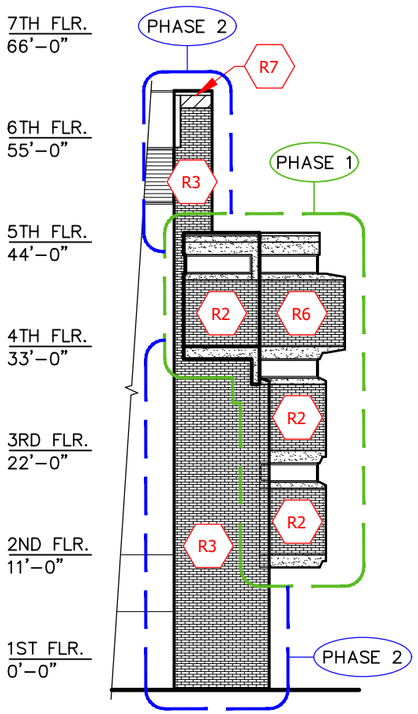
5| WEST ELEVATION - AT MID ROOF



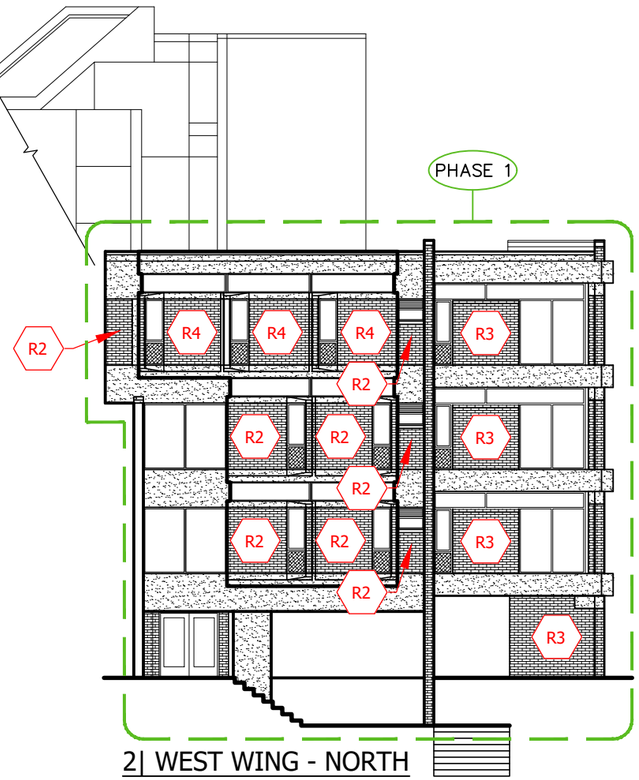
4| WEST WING - SOUTH



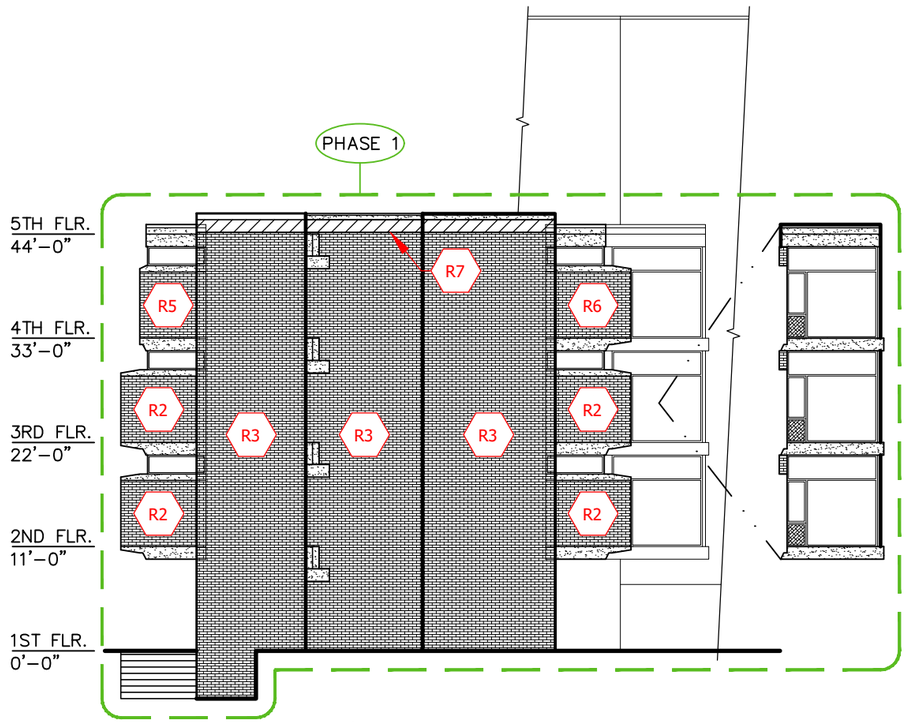
KEY PLAN



1| WEST WING - EAST



2| WEST WING - NORTH



3| WEST WING - WEST

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EXTERIOR ELEVATIONS

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
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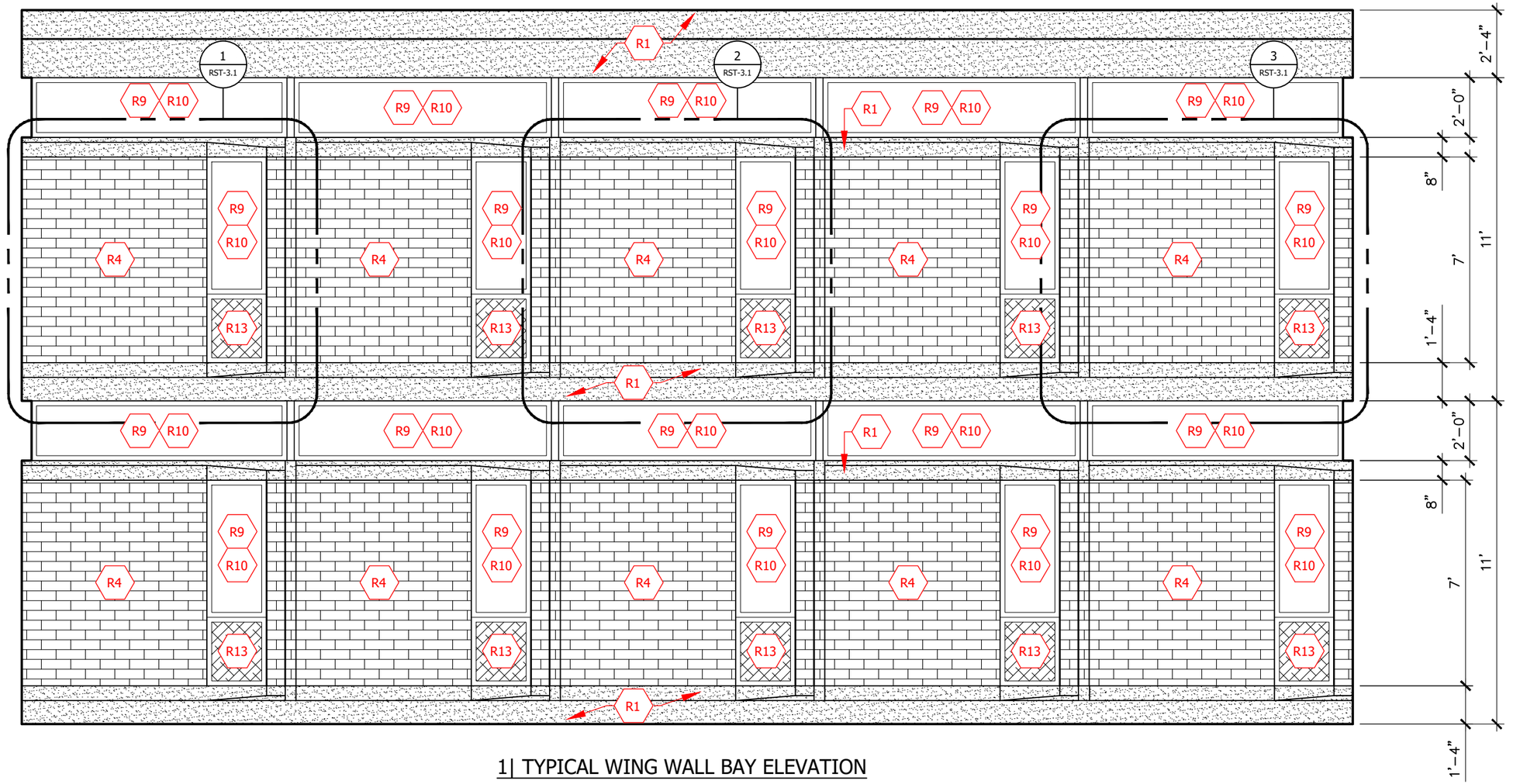
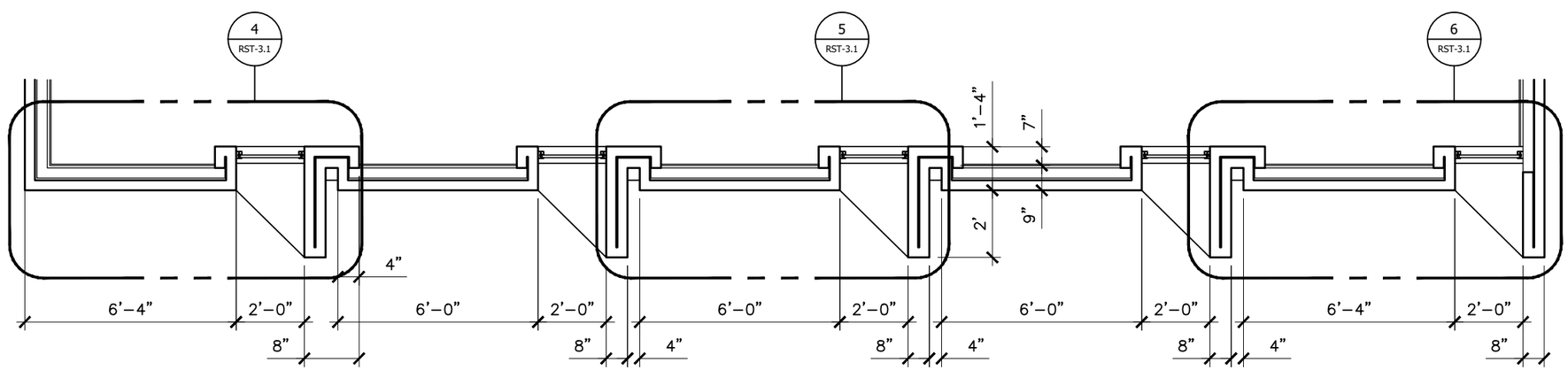
REVISIONS / ADDENDA:	
OWNERS REVISION: 11/14/24	
SCALE:	N.T.S.
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST–2.4



1| TYPICAL WING WALL BAY ELEVATION



2| TYPICAL WING WALL BAY PLAN DETAIL

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TYPICAL WING WALL BAY

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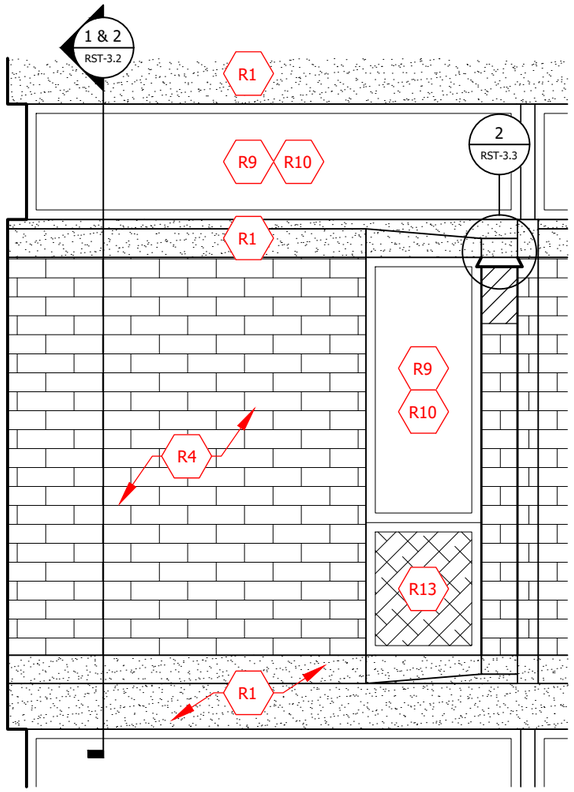
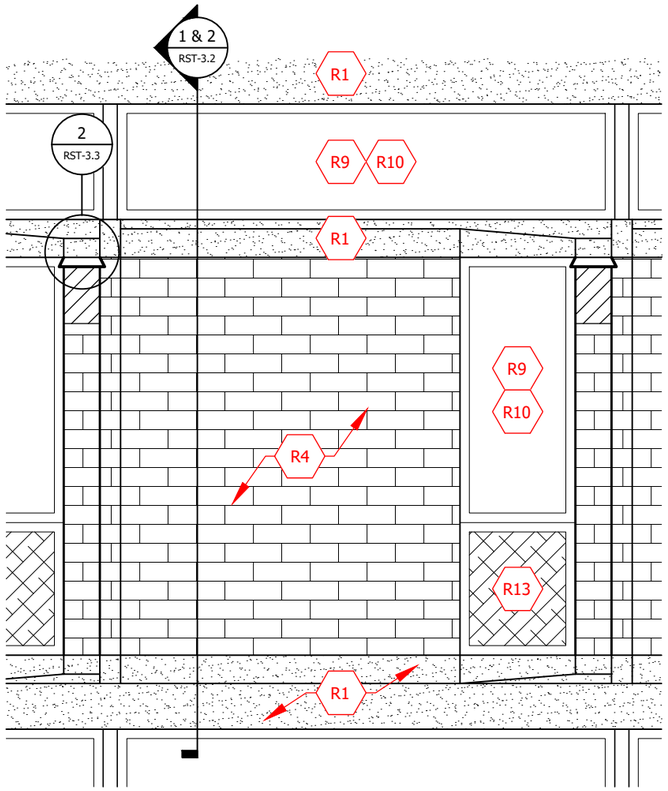
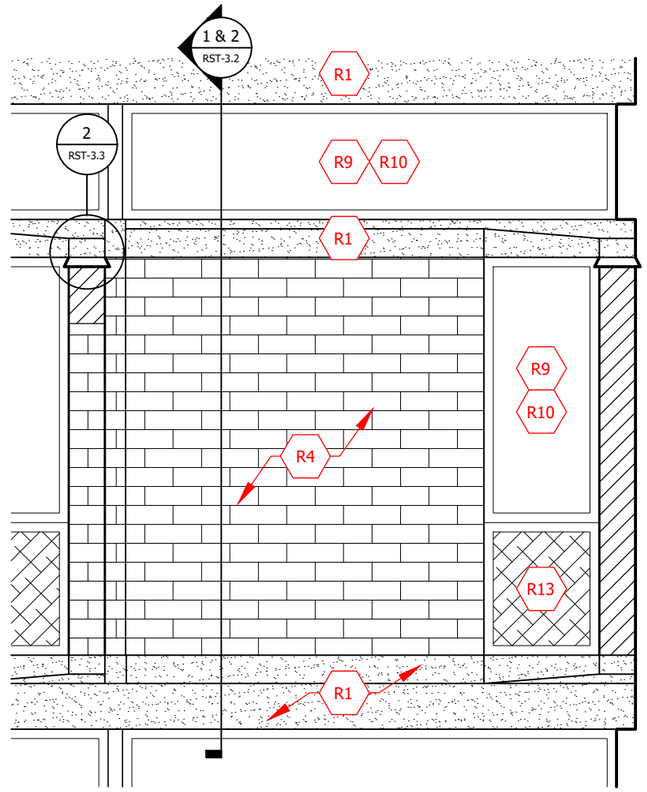
SCALE:	N.T.S.
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST–3.0



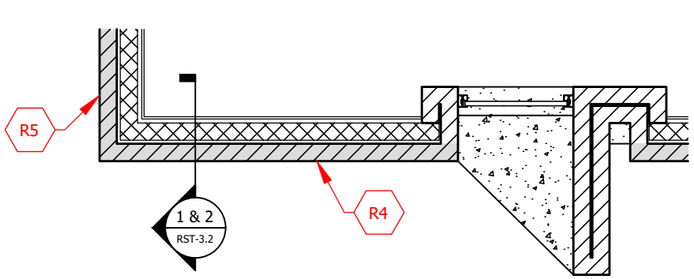
1| TYPICAL WING WALL BAY ELEVATION - CORNER
(AT BAY RETURN)



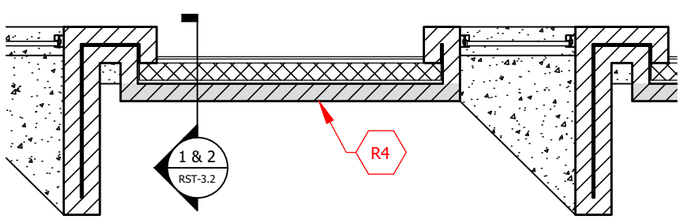
2| TYPICAL WING WALL BAY ELEVATION



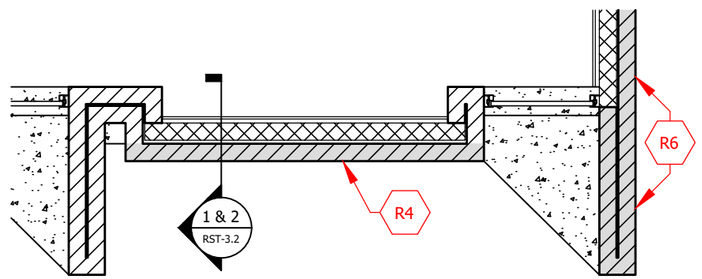
3| TYPICAL WING WALL BAY ELEVATION - CORNER
(AT WING WALL RETURN)



4| TYPICAL WING WALL BAY PLAN - CORNER
(AT BAY RETURN)



5| TYPICAL WING WALL BAY PLAN



6| TYPICAL WING WALL BAY PLAN - CORNER
(AT WING WALL RETURN)

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TYPICAL WING WALL BAY

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DATE: OCTOBER 2024
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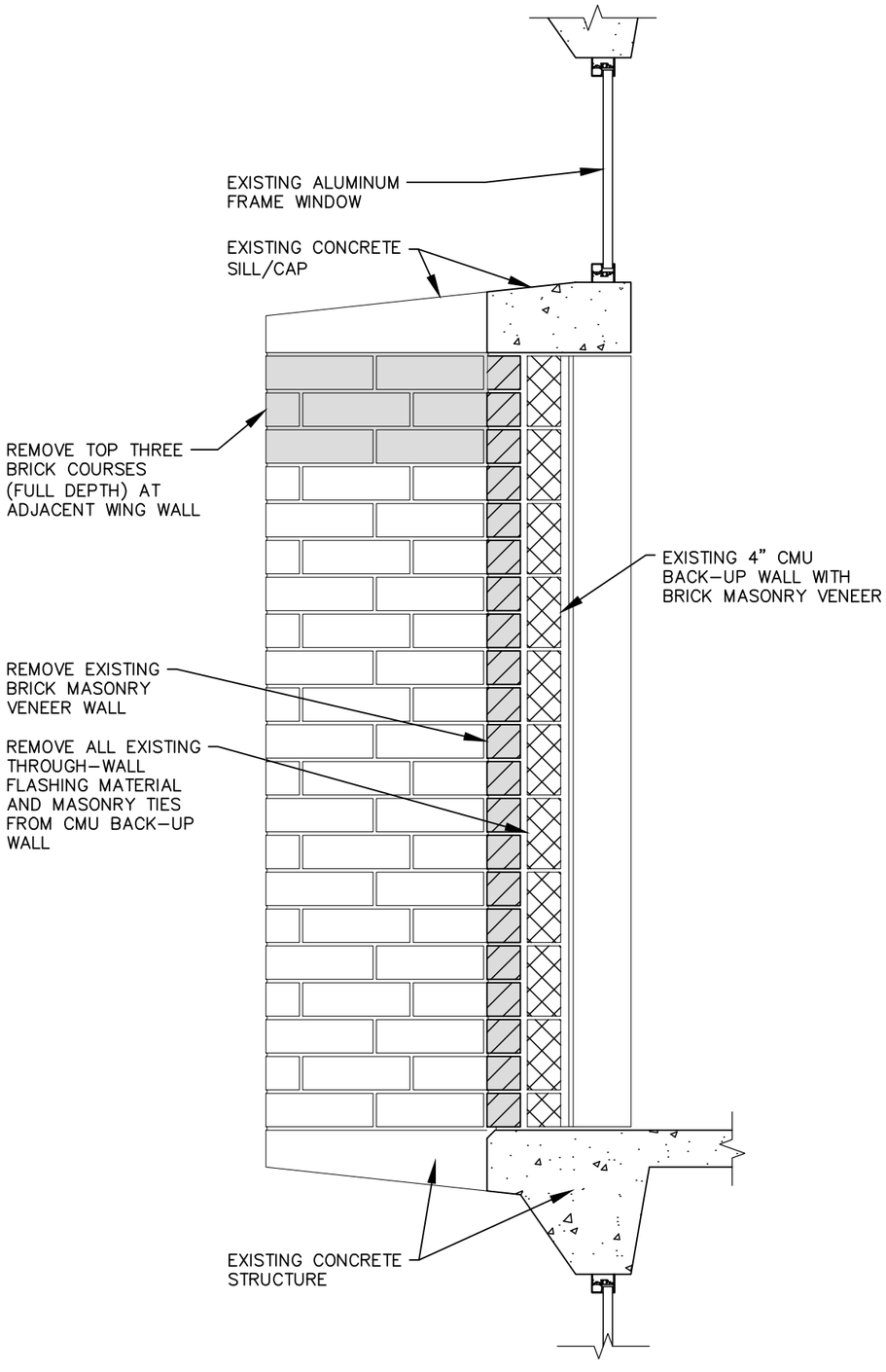
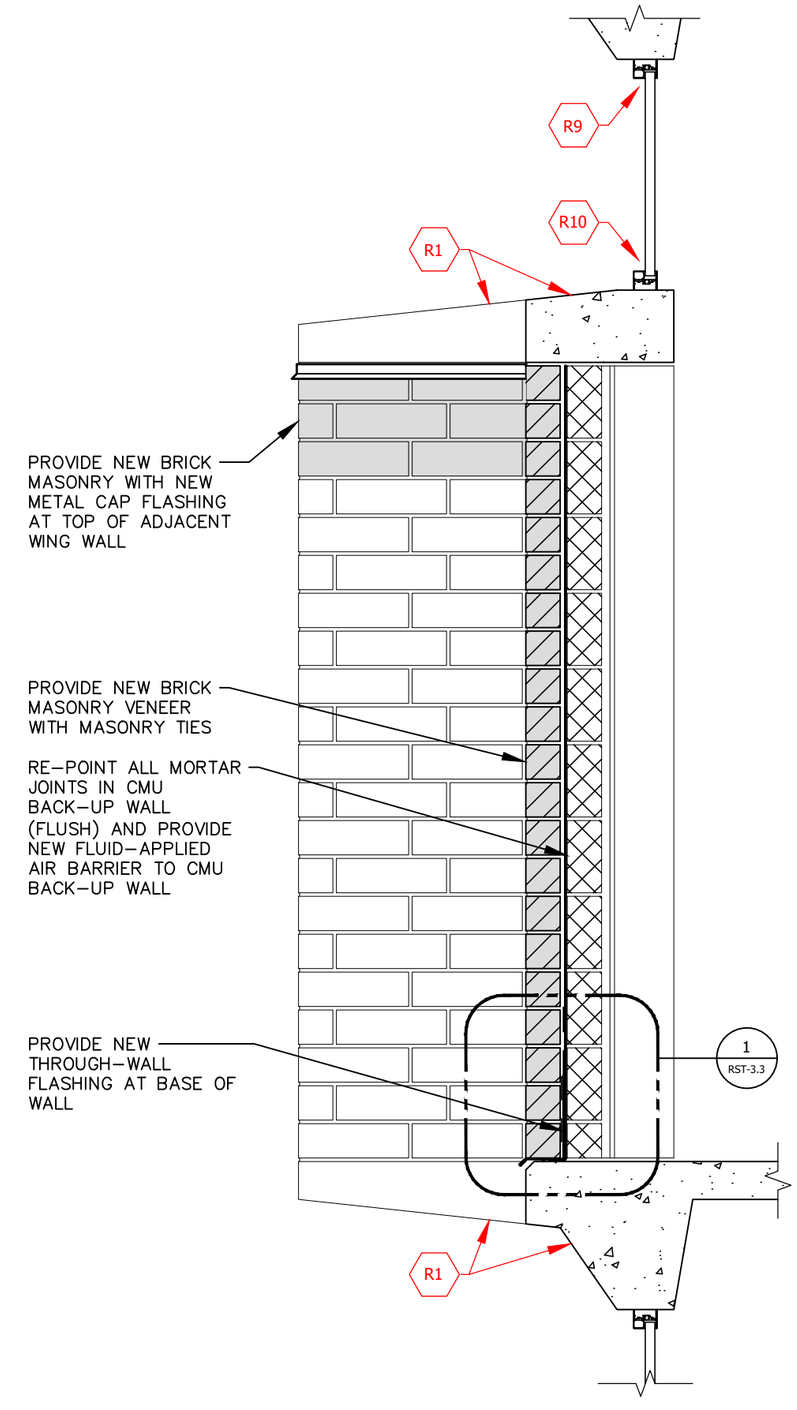
DRAWING NUMBER: RST–3.1



1| WALL SECTION - DEMOLITION

(RESTORATION NOTE R4; R5 AND R6 ARE SIMILAR)



2| WALL SECTION - CONSTRUCTION

(RESTORATION NOTE R4; R5 AND R6 ARE SIMILAR)

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WALL SECTION

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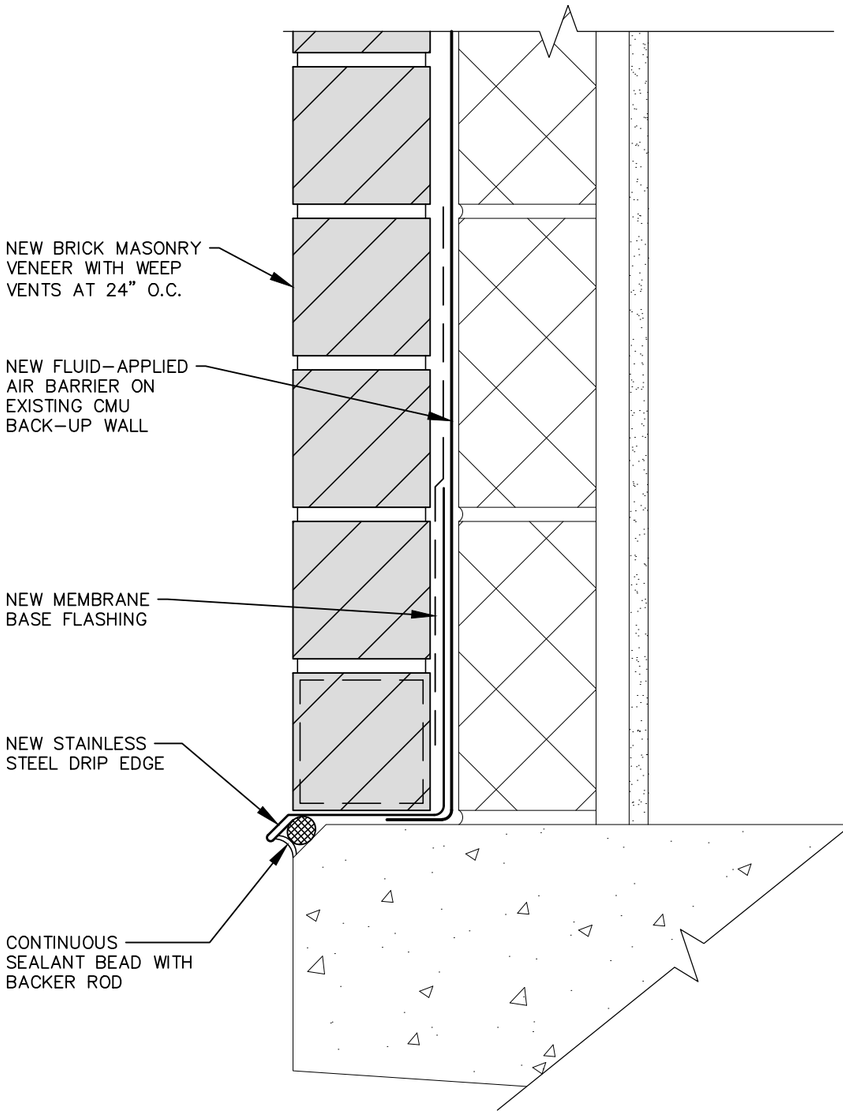
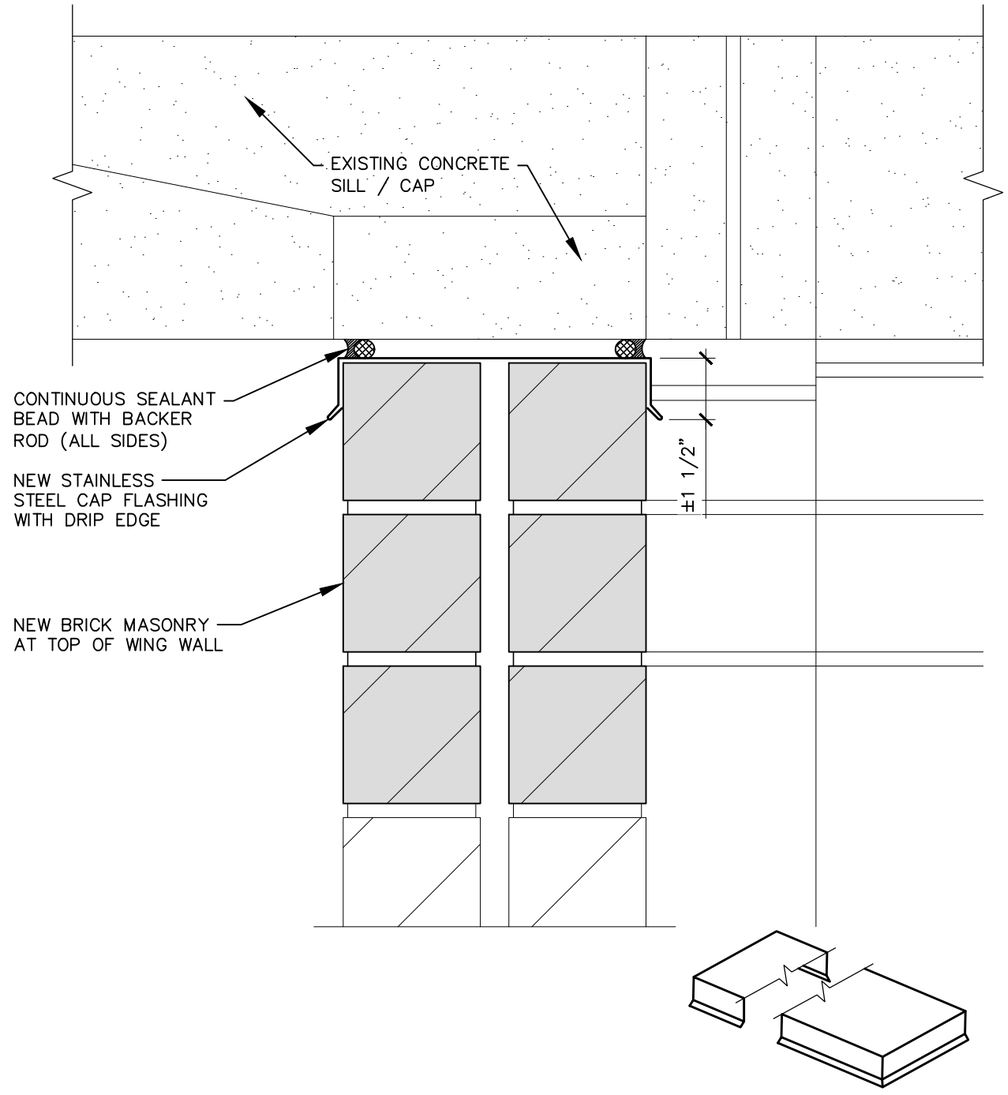
DRAWING NUMBER: RST-3.2



1| WING WALL BAY THROUGH-WALL FLASHING



2| WING WALL CAP FLASHING DETAIL

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DETAILS

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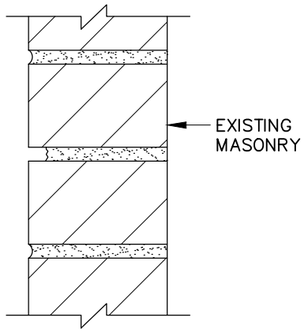
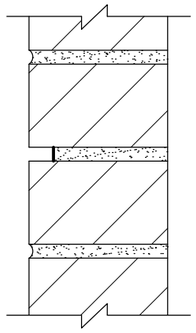
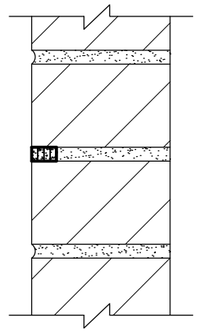


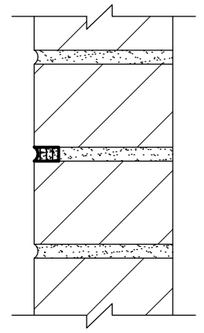
A) EXISTING DETERIORATED MORTAR JOINT



B) CUT BACK EXISTING MORTAR TO A UNIFORM DEPTH (MIN. 1")

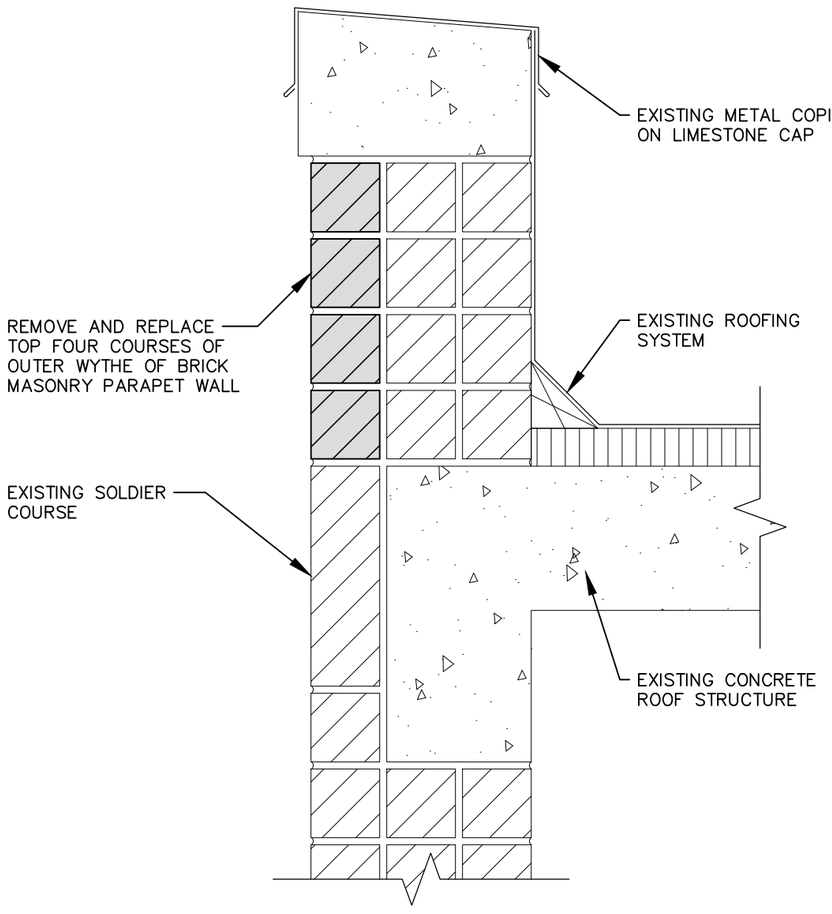


C) PLACE RE-POINTING MORTAR IN ¼" LAYERS, CONSOLIDATING EACH LAYER

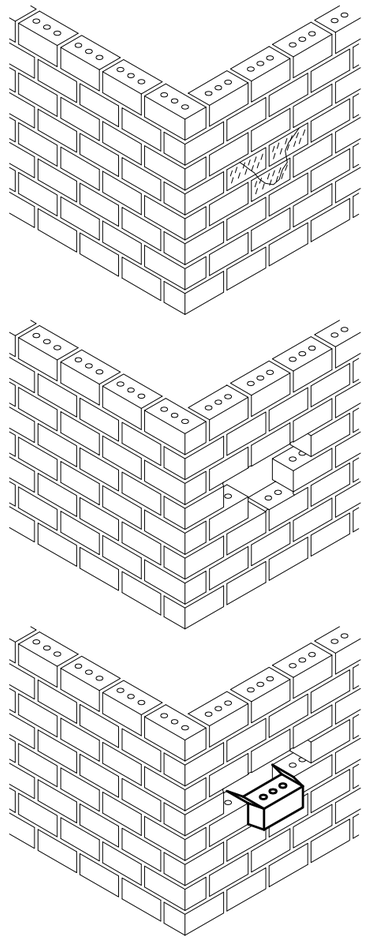


D) TOOL JOINT TO MATCH ORIGINAL PROFILE

3| TYPICAL RE-POINTING



1| PARAPET REPAIR DETAIL



A) EXISTING DAMAGED BRICK UNITS

B) REMOVE DAMAGED EXISTING BRICK UNITS AND MORTAR WITH MOTOR DRIVEN SAWS AND HAND TOOLS. PROVIDE SHORING AS REQUIRED TO PREVENT MOVEMENT OF THE REMAINING MASONRY. DO NOT DAMAGE ADJACENT BRICK UNITS THAT ARE TO REMAIN. REPLACE ALL UNITS / MASONRY DAMAGED BY THE REMOVAL PROCESS AT NO ADDITIONAL COST TO THE OWNER.

SET INTO PLACE. FILL ALL HEAD AND BED JOINTS WITH MORTAR. TOOL MORTAR TO MATCH EXISTING.

2| ISOLATED BRICK REPLACEMENT

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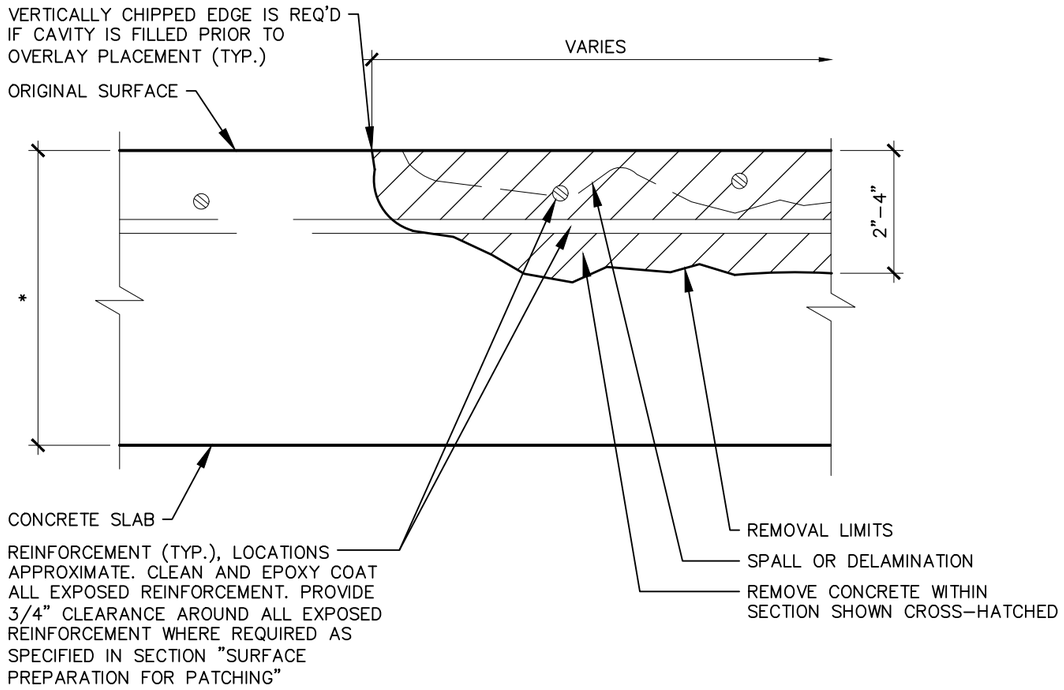
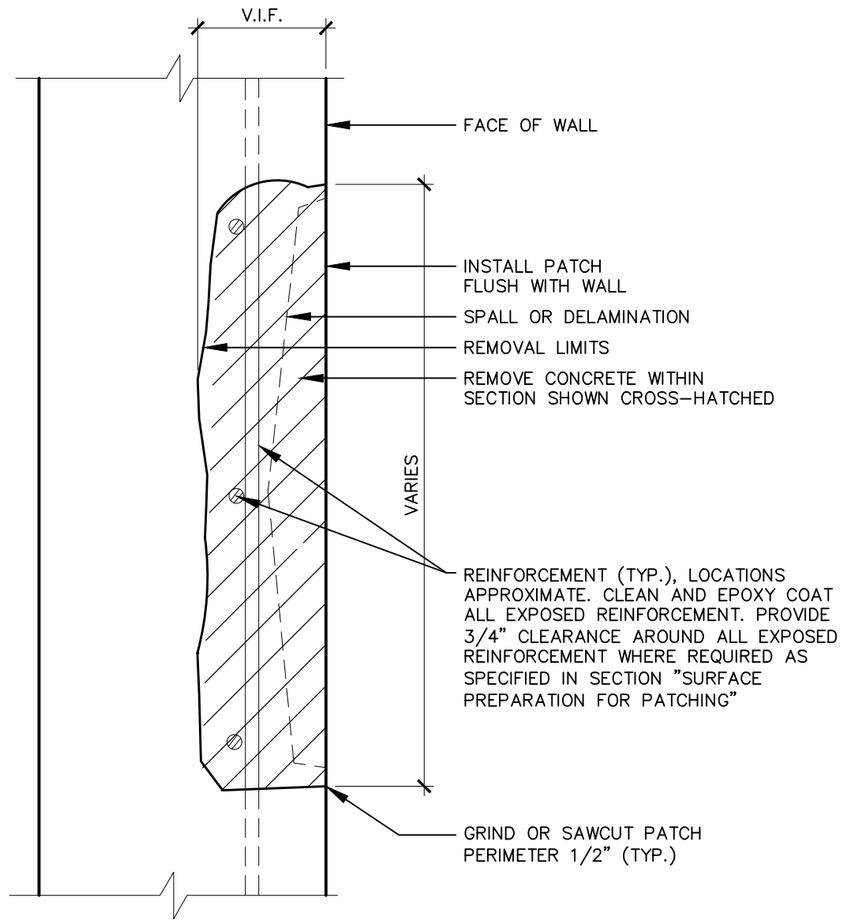
RESTORATION DETAILS

2024 RESTORATION PROGRAM
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
MILTON HALL
808 RIDGE AVE. PITTSBURGH, PA 15212

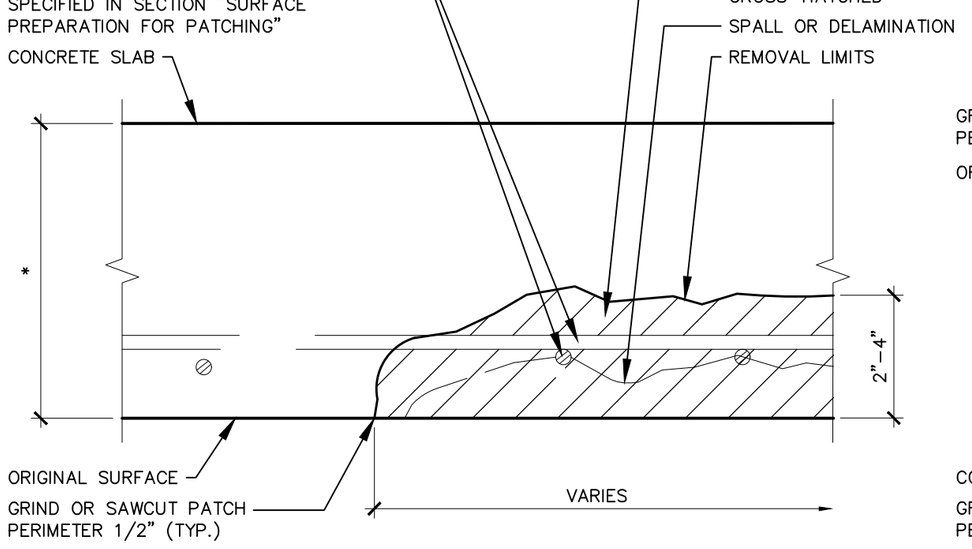
REVISIONS / ADDENDA:	
OWNERS REVISION: 11/14/24	
SCALE:	N.T.S.
APPROVED BY:	C.A.H.
DRAWN BY:	R.M.K.F.
DATE:	OCTOBER 2024
PROJECT NUMBER:	T24069
DRAWING NUMBER:	RST-4.0



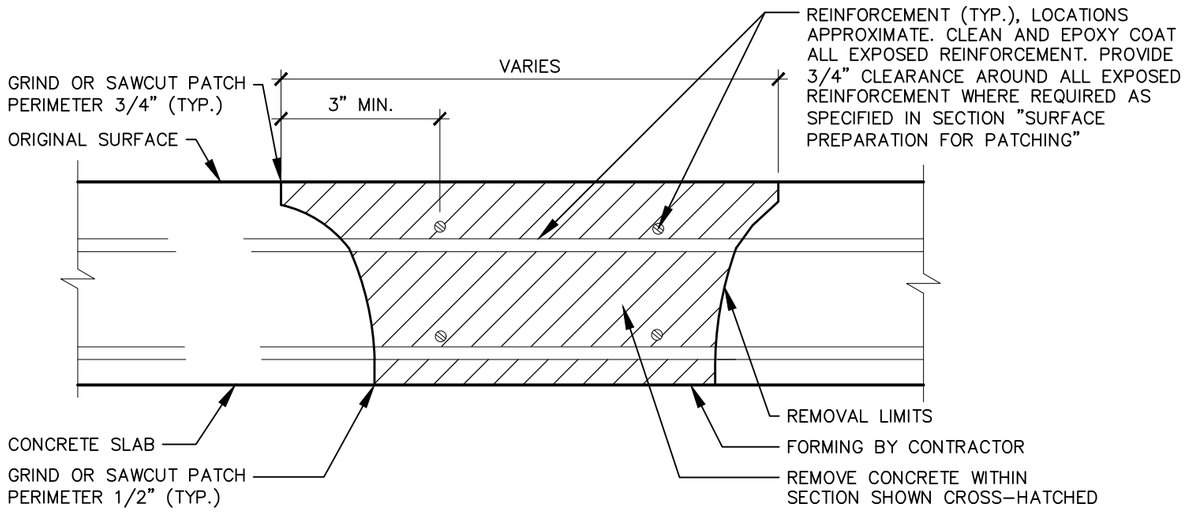
1| FLOOR REPAIR - PARTIAL DEPTH



2| CONCRETE REPAIR - VERTICAL



3| CEILING REPAIR - PARTIAL DEPTH



4| CEILING REPAIR - FULL DEPTH

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DATE: OCTOBER 2024
PROJECT NUMBER: T24069
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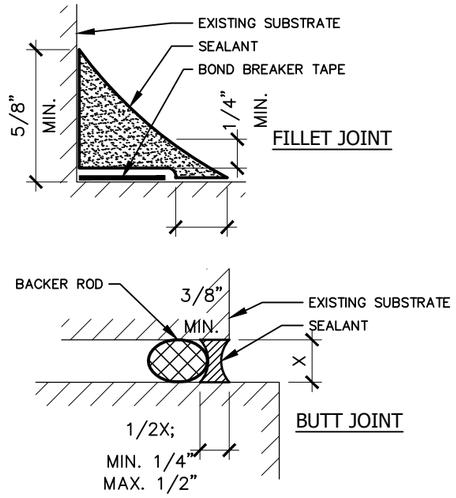
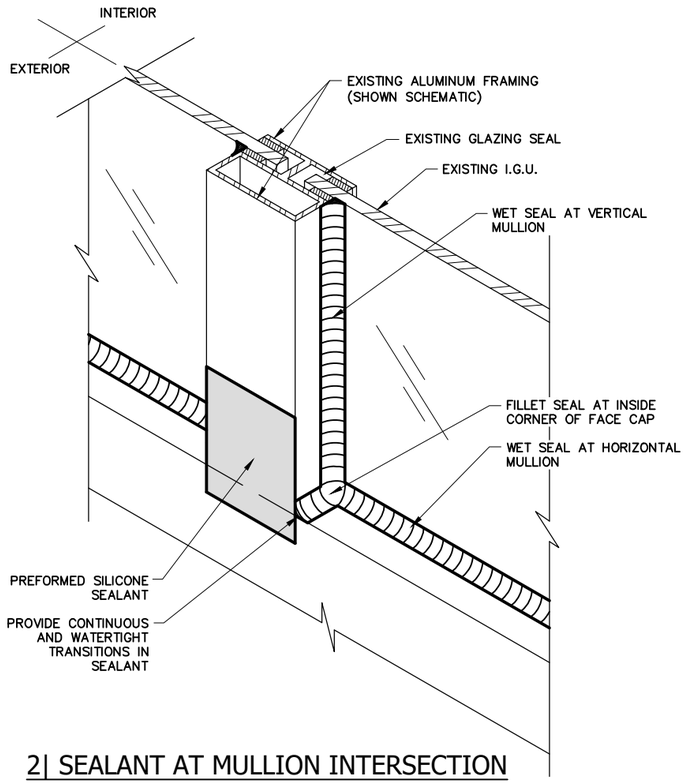
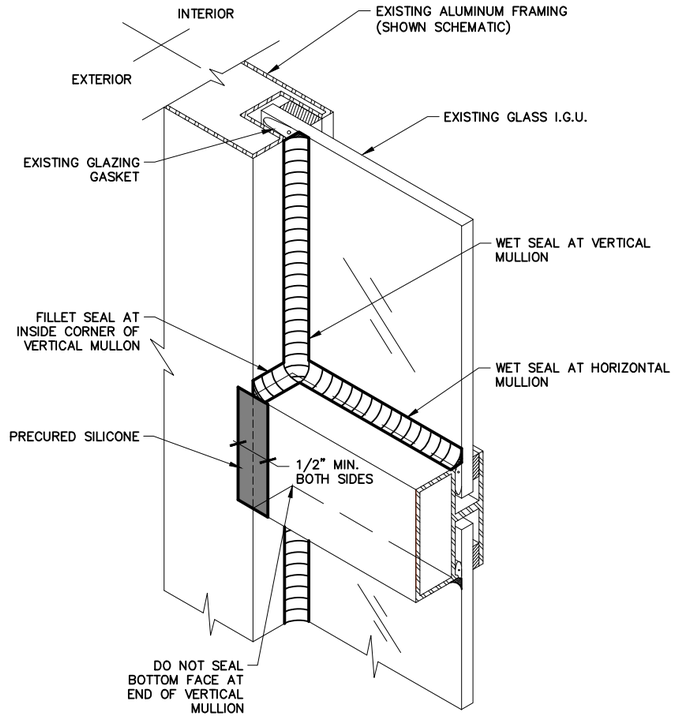


1| TYPICAL SEALANT JOINT



2| SEALANT AT MULLION INTERSECTION



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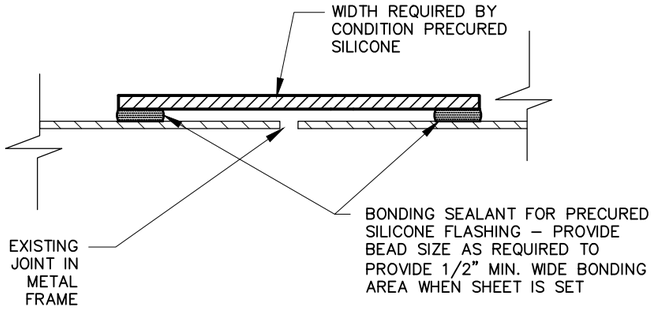
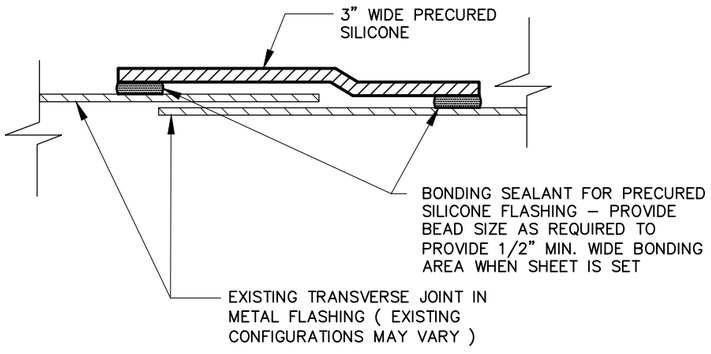
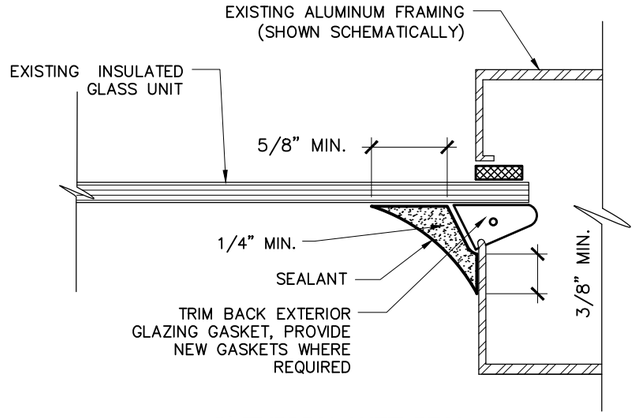


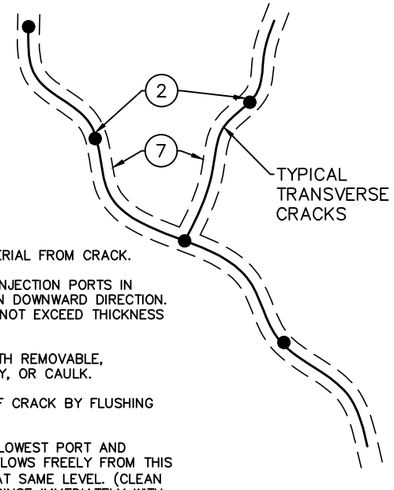
4| PRECURED FLASHING AT WINDOW FRAMING JOINT



5| PRECURED SEALANT AT LAPPED METAL SEAM



6| TYPICAL WET SEAL



PROCEDURE NOTES:

1. REMOVE LOOSE MATERIAL FROM CRACK.
2. DRILL A SERIES OF INJECTION PORTS IN CENTER OF CRACK IN DOWNWARD DIRECTION. MAX SPACING SHAL NOT EXCEED THICKNESS OF CONCRETE.
3. SEAL THE CRACK WITH REMOVABLE, NON–SHRINKING CLAY, OR CAULK.
4. MOISTEN INTERIOR OF CRACK BY FLUSHING WITH WATER.
5. INJECT GROUT INTO LOWEST PORT AND CONTINUE UNTIL IT FLOWS FREELY FROM THIS PORT AND OTHERS AT SAME LEVEL. (CLEAN UP OVERFLOW AND RINSE IMMEDIATELY WITH CLEAN WATER.)
6. ALLOW GROUT TO DRY / CURE (APPROX. 24 HOURS) AND REMOVE SURFACE SEALER.
7. ROUT / CHASE CRACK AND FILL WITH REPAIR MORTAR OF MATCHING COLOR AND TEXTURE: FINISH FLUSH WITH WALL SURFACE.

7| CRACK INJECTION REPAIR - TRANSVERSE / VERTICAL CRACKS

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StructureTec® Group

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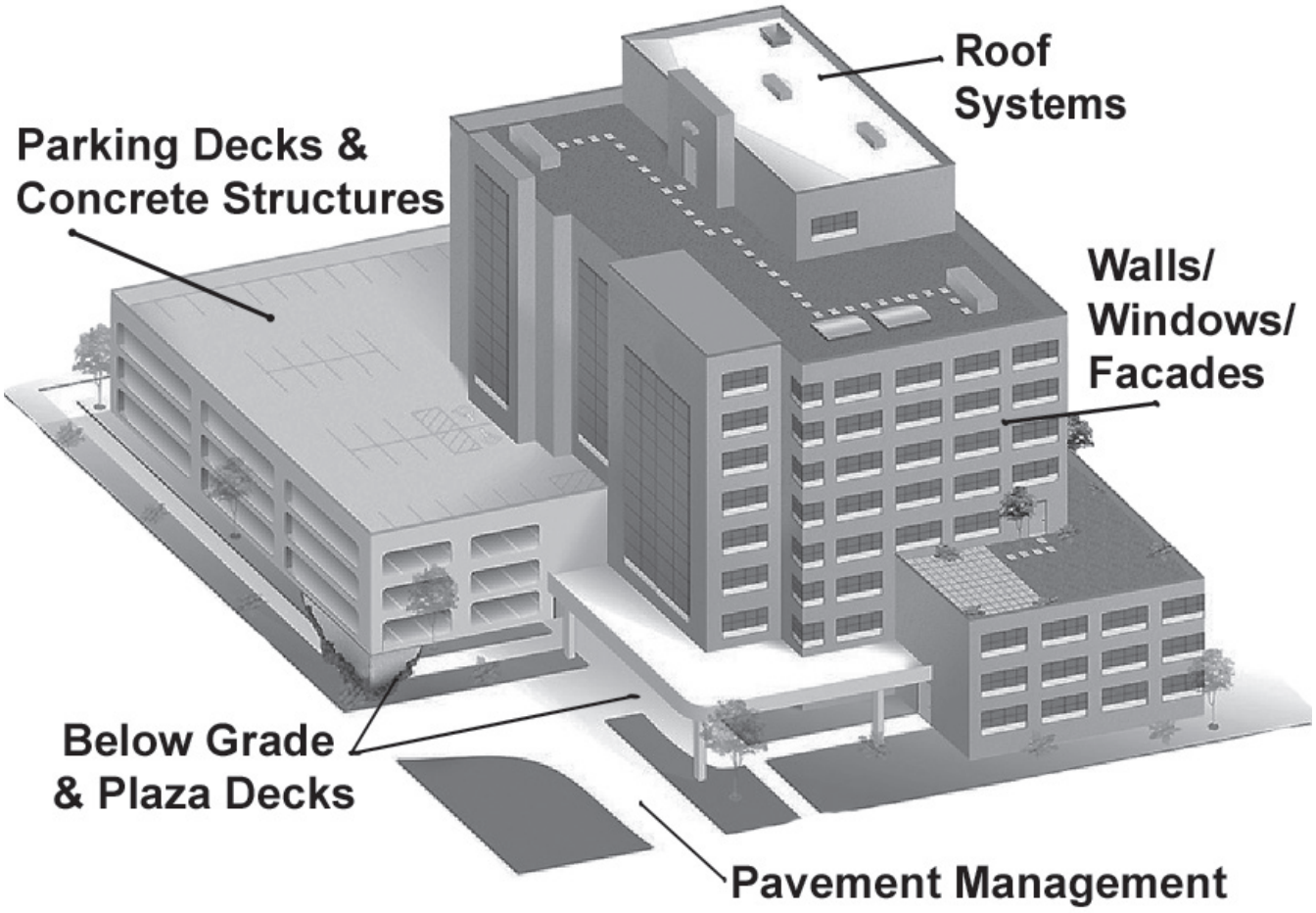
- Total Turnkey Approach
- Construction Management - **Platinum Program**℠
- Design/Build - ***PREMIER*** *ENGINEERED PROJECTS*℠
- Design/Bid/Build - **StructureTec®**



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