

SECTION 001000

NOTICE TO BIDDERS - INVITATION TO BID No. 134.23.B4

**AUTOMOTIVE LAB RENOVATIONS AT THE HOWARD COUNTY PUBLIC SCHOOLS  
APPLICATIONS AND RESEARCH LABORATORY**

THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 CLARKSVILLE PIKE  
ELLCOTT CITY, MD 21042-6198

The Howard County Public School System (HCPSS) requests your bid for the Theatrical House Lighting and Controls for the Auditorium at Wilde Lake High School as specified in the bid documents.

**Bids Due:** All bids shall be submitted electronically via email in their entirety (all pages) **PDF format** and received no later than **July 26, 2023 at 10:00 A.M.** to [BidsandProposals@hcpss.org](mailto:BidsandProposals@hcpss.org). Bids that contain either more than one file, or files larger than 75MB, shall be inserted into an e-folder and compressed in a .zip file. To ensure delivery, if the file size cumulatively exceeds 75MB it is recommended that bidders submit separate emails labeled No.1, No.2, etc.

**Email subject lines, folder names and File names shall include: The Bid title “Theatrical House Lighting and Controls for the Auditorium at Wilde Lake High School”, the “Bid Number #055.23.B4”, you’re Company Name”** In the body of the email please include Bidders contact persons e-mail and cell phone number for contacting purposes if/when necessary.

Please note that the Bids and Proposal e-mail address should not be used for any other purpose other than to forward your proposals on the day that the bids are due. This is not to be used for questions or other communication purposes. Do not copy the Purchasing Specialist with your proposals. Proposals must only be sent to the Bids and Proposals e-mail address.

**Do not send bids via hand delivery, postal service or carrier since they will not be opened or considered for award. All proposal must be submitted electronically through the Bids and Proposal e-mail address above.**

**All Questions** shall be directed, in writing, no later than **10:00 A.M., July 14, 2023** to the Purchasing Specialist, Robert Gill, [robert\\_gill@hcpss.org](mailto:robert_gill@hcpss.org). The Howard County Public School System is under no obligation to respond to any questions that are received after the cutoff date and time. Only answers provided via an addendum issued by the HCPSS will be binding. Under no circumstances are bidders, including third party vendors or their staff, to contact any other HCPSS Staff, employees or any related constituency for purposes associated with this solicitation, including but not limited to, obtaining or providing information. **Bidders failing to comply with this requirement may be disqualified.**

**The Pre-bid Meeting ; will be held on July 12, 2023 at 10:00 A.M.** the Pre-bid meeting will be held Via Tele-Conference. To view the virtual public Pre-bid conference call/video please copy the following link into the address bar of your web browser:

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_N2I3MjNjODYtODAsNS00MTcwLWE1Y2QtZTcxYjY0YjI2Njhhk%40thread.v2/0?content=%7b%22Tid%22%3a%22296a9ac4c-477e-4dad-a2b2-8ad3fc46790b%22%2c%22Oid%22%3a%223bda6dde-89df-46e2-8e1a-c1fc2117b858%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_N2I3MjNjODYtODAsNS00MTcwLWE1Y2QtZTcxYjY0YjI2Njhhk%40thread.v2/0?content=%7b%22Tid%22%3a%22296a9ac4c-477e-4dad-a2b2-8ad3fc46790b%22%2c%22Oid%22%3a%223bda6dde-89df-46e2-8e1a-c1fc2117b858%22%7d)

If you do not have Microsoft Teams installed on your computer, click on the button to view from your web browser."

If you prefer to access the meeting by phone then please call 1-301-960-8312, the conference ID: 581 969 673#

The HCPSS staff will explain the scope of the project and answer questions about the bid documents and the scope of the project that will help in preparation of the bids. Attendance is strongly recommended and

will assist the Owner in evaluating the bids to determine if the bid can be considered responsive and/or responsible.

**Site Visit:** The site visit will be held on **July 13, 2023 at 10:00 AM** at the HCPSS Applications and Research Laboratory, 10920 Clarksville Pike, Ellicott City Md 21042. All interested bidders should meet outside the front entrance of the school prior to the announced time and then be escorted by building maintenance staff to the project site.

**Addenda:** It is the potential bidder's sole responsibility to regularly visit the HCPSS Purchasing website [www.hcpss.org/about-us/purchasing/current-bids/](http://www.hcpss.org/about-us/purchasing/current-bids/) to download and acknowledge receipt of all Addenda. It is highly recommended that bidders ascertain if they have received all the addenda issued prior to submitting their proposal. Failure of any bidder to acknowledge any such Addenda or interpretation may not relieve such bidder from obligation under his/her proposal as submitted.

**Minority Business Enterprise**

Maryland Department of Transportation (MDOT) Certified Minority Business Enterprises are encouraged to respond to this solicitation notice.

The Contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the MBE goal for each contract package as follows:

Contract Package	MBE Goal	MBE Sub Goals	
1A-General	29%	African-American 11%	Woman Owned 11%

All Prime Contractors, including certified MBE firms, when submitting their Bids or Proposals as General or Prime Contractors are required to attempt to achieve this goal from certified MBE firms.

In accordance with the Governor's Office of Minority Affairs, a MBE Prime contractor may self-perform up to 50% of the overall MBE contract goal and up to 100% of any one MBE contract subgoal, provided that the certified MBE prime contractor is properly identified on the MBE participation schedule and the firm is NAICS code-certified to do the work.

The bidder or offeror is required to submit with its bid or proposal a completed Attachment A - Certified MBE Utilization and Fair Solicitation Affidavit and Attachment B - MBE Participation Schedule as described in these solicitation documents. Each bid or offer submitted, including a submittal from a certified MBE in response to this solicitation, shall be accompanied by a completed Attachment A - Certified MBE Utilization and Fair Solicitation Affidavit and a completed Attachment B - MBE Participation Schedule. These two attachments must be accurate and consistent with each other. Attachment A and Attachment B shall be submitted with the sealed bid price at the place, date, and time specified in the solicitation document. The bidder or offeror must check one of the three boxes on Attachment A, which relates to the level of MBE participation achieved for the project.

The contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the specific overall MBE goals listed above that have been established for this project. All prime contractors, including certified MBE firms, when submitting bids or proposals as general or prime contractors are required to attempt to achieve this goal from MDOT certified MBE firms. Bidders are encouraged to review Section 000730 of the bidding documents for the full Minority Business Enterprise Procedures.

The bidder must check one of the three boxes on Attachment A, which relates to the level of MBE participation achieved for the project. The bidder's signature indicates that in the event that they did not meet the MBE goal or sub-goals, if applicable, that: 1) They are therefore requesting a waiver, and 2) Documentation of their good faith efforts will be provided to the school system staff within 10 days of being notified that they are the apparent low bidder.

Instructions pertaining to the Bid Bond, Surety Checks, Performance and Materials Payment Bond requirements are contained in the bid documents.

The conditions contained in this Notice to Bidders, Invitation to Bid, are a part of the bid documents.

The Board reserves the right to waive any informality in, or to reject any or all bids.

Contractors are required to register on eMaryland Marketplace Advantage at [eMaryland Marketplace Advantage \(eMMA\)](#) within five days following notice of award. Maryland law requires local and state agencies to post award notices on eMaryland Marketplace Advantage. This cannot be done without the contractor's self-registration in the system. Registration is free. Failure to comply with this requirement may be considered grounds for default. It is recommended that any interested bidder register with eMaryland Marketplace Advantage regardless of the award outcome for this procurement as it is a valuable resource for bid notification for municipalities throughout Maryland.

Please return the attached NO BID REPLY FORM if your firm does not bid this project. This form may be faxed to (410) 313-6789.

Robert B. Gill, CPPO, CPPB  
Purchasing Specialist

END OF SECTION



Office of Purchasing  
10910 Clarksville Pike  
Ellicott City, Maryland 21042-6198  
(410) 313-4584, fax (410) 313-6789

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THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Clarksville Pike  
Ellicott City, Maryland 21042

**NO BID REPLY FORM**

Sealed Bid for: **AUTOMOTIVE LAB RENOVATIONS AT THE HOWARD COUNTY PUBLIC SCHOOLS APPLICATION AND RESEARCH LABORATORY**

Bid Number:     **Bid #134.23.B4**    

Bidder: \_\_\_\_\_

To assist us in obtaining good competition on our request for bids, we ask that each firm that has received an invitation, but does not wish to bid, state their reason(s) below.

Unfortunately, we must offer a "No Bid" at this time because:

- \_\_\_\_\_ 1. We do not wish to bid under the terms and conditions of the Bid document. Our objections are:  
\_\_\_\_\_  
\_\_\_\_\_
- \_\_\_\_\_ 2. We do not feel we can be competitive.
- \_\_\_\_\_ 3. We cannot submit a bid because of the marketing or franchising policies of the manufacturing company.
- \_\_\_\_\_ 4. We do not wish to sell to The Howard County Public School System. Our objections are:  
\_\_\_\_\_
- \_\_\_\_\_ 5. We do not sell the item(s)/service(s) requested in the specific specifications.
- \_\_\_\_\_ 6. Other: \_\_\_\_\_  
\_\_\_\_\_

**AUTOMOTIVE LAB RENOVATIONS AT THE HOWARD COUNTY PUBLIC  
SCHOOLS APPLICATIONS AND RESEARCH LABORATORY  
BID # 134.23.B4**

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
10910 Clarksville Pike  
Ellicott City, Maryland 21042**

**ISSUE DATE:** June 28, 2023

**SEALED BID FOR:** Automotive Lab Renovations at the Howard County Public  
Schools Applications and Research Laboratory

**BID NUMBER:** Bid # 134.23.B4

**PRE-BID DATE:** July 12, 2023

**PRE-BID TIME:** 10:00 A.M.

**PRE-BID LOCATION:** The Pre-bid meeting will be held Via Tele-Conference call.  
To access the Tele- Conference please follow the  
instructions in the Notice to Bidders.

**SITE VISIT** July 13, 2023 at 10:00 AM at the HCPSS Applications and  
Research Laboratory. See Notice to Bidders for details

**QUESTIONS DUE** July 14, 2023 at 10:00 AM,  
in writing Submit To: Robert Gill at [robert\\_gill@hcpss.org](mailto:robert_gill@hcpss.org)  
\*\* As necessary an addendum will be issued after the due  
date above to address any questions.

**BID DUE DATE/TIME:** July 26, 2023 at 10:00 AM – See Notice to Bidders for  
Electronic Submission Instructions

**BUYER:** Mr. Robert Gill  
email: [Robert\\_Gill@hcpss.org](mailto:Robert_Gill@hcpss.org)

## INDEX OF SOLICITATION DOCUMENTS SECTIONS

Automotive Lab Renovations at Howard County Public Schools  
Applications and Research Laboratory  
**BID #134.23.B4**

### **DIVISION 00 – INSTRUCTIONS AND CONDITIONS**

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001001	No Bid Reply Form
001002	Key Bid Process Dates Cover Sheet
002000	AIA Document A701-1997, Instructions to Bidders
003000	Form of Proposal - Including; Experience / Reference Form Profile of Company Form Key Personnel Form – Staffing Plan (Installer) MBE, Attachment A – (Wage Scale) MBE, Attachment B – (Wage Scale)
000310	AIA Document A310 – 2010, Bid Bond
000600	AIA Document A101-2017, Standard Form of Agreement between Owner and Contractor.
000601	Insurance Requirements
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000720	HCPSS Supplemental General Terms and Conditions.
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**GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS (See the Table of Contents under Division 01 - 31)**

# AIA<sup>®</sup> Document A701™ – 2018

## ***Instructions to Bidders***

for the following Project:  
*(Name, location, and detailed description)*

**THE OWNER:**  
*(Name, legal status, address, and other information)*

**THE ARCHITECT:**  
*(Name, legal status, address, and other information)*

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- 8      ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS**

**ADDITIONS AND DELETIONS:**  
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

## **ARTICLE 1 DEFINITIONS**

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201-2007 Edition and as modified by Howard county Public School System or other Contract Documents as applicable to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

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

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

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

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

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

## **ARTICLE 2 BIDDER'S REPRESENTATIONS**

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

§ 2.1.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

## **ARTICLE 3 BIDDING DOCUMENTS**

### **§ 3.1 COPIES**

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.

*(Paragraphs deleted)*

The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.



§ 3.1.2 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the Advertisement or Invitation to Bid, or in supplementary instructions to bidders.

§ 3.1.3 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

§ 3.1.4 The Owner and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

*(Paragraph deleted)*

### § 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered.

§ 3.2.2 Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Construction Manager and Architect at least seven business days prior to the date for receipt of Bids.

*(Paragraphs deleted)*

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

### § 3.3 SUBSTITUTIONS

*(Paragraph deleted)*

§3.3.1 Bids shall be based upon the materials, systems and equipment required by the bidding documents without exception. Proposed substitute products or manufacturers shall be submitted in accordance with the following provisions:

- a. No substitutions will be considered prior to receipt of bids. The Contract award will be made solely on the basis of Base bid, Alternate Bids with regard to proposed substitutions and deducts when requested.
- b. Bidders may propose substitutions for the materials, systems and equipment specified or whom by listing them in the space provided on the Form of Proposal, along with any stipulated cost adjustment (add, deduct or no change) in the Base Bid or Alternate bids. Proposed substitutions may be accepted with the award of the contract or later by the Owner.
- c. Provide all necessary backup data for proposed substitutions at time of bid for review by Owner.
- d. The Architect will evaluate all substitutions based on compliance with the environmental goals stated in the specifications. All proposed substitutions shall document and demonstrate meeting or exceeding LEED certification requirements through product data, MSDS sheets and other supporting literature that highlight conformance. Any substitution that does not have this information highlighted will be rejected.

§ 3.3.2 It is the responsibility of the bidder to provide documentation with the bid at the date and time set forth for submission. The burden of proof that proposed substitutes are in fact equal or better falls on the bidder and proof must be to the satisfaction of HCPSS. The HCPSS shall be the sole authority as to whether proposed substitute items meet specifications or are an approved equal. The HCPSS decision of approving or disapproving of a proposed equal shall be final.

*(Paragraphs deleted)*

§ 3.3.3 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

*(Paragraphs deleted)*

**§ 3.4 ADDENDA**

**§ 3.4.1** Addenda will be

*(Paragraphs deleted)*

posted on the school system website.

**§ 3.4.2** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

**§ 3.4.3** Addenda will be issued no later than two days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

**§ 3.4.4** Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

**ARTICLE 4 BIDDING PROCEDURES**

**§ 4.1 PREPARATION OF BIDS**

**§ 4.1.1** Bids shall be submitted on the forms included with the Bidding Documents. Submit Form of Proposal (Bids) in triplicate.

**§ 4.1.2** All blanks on the bid form shall be legibly executed in a non-erasable medium. If blanks do not apply insert " O " in spaces.

**§ 4.1.3** Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.

**§ 4.1.4** All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change."

**§ 4.1.5** Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

*(Paragraphs deleted)*

**§4.1.6** All addenda shall be acknowledged on the Form of Proposal

**§ 4.2 BID SECURITY**

**§ 4.2.1** Each Bid shall be accompanied by a bid security in the form and amount required if so stipulated in the Instructions to Bidders. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

**4.2.2** Bonds shall be written by a bonding company that must be licensed with Maryland Insurance Administration to do business in the state of Maryland and otherwise acceptable to the Howard County Public School System. The Contractor shall use Bond Form provided by the Owner AIA 310 Bid Bond, in order to satisfy the Bond requirements referenced in this Article and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney in an amount not less than required.

**4.2.3** The bonding company furnishing the Bid Bond shall provide upon request to the Purchasing Department, the following statement, signed by an authorized representative for the bonding company: **As surety for (Name of**

Contractor), (Name of Bonding Company), hereby agrees to furnish the 100% Performance, Labor and Materials Bonds, as required by the specifications for the (Name of Project), on behalf of the Contractor, in the event that such firm be the successful bidder for this project. Failure to provide this statement may be cause to reject submitted bid.

§ 4.2.4 Bid Bond shall be in the amount of 5% of the Base Bid.

*(Paragraph deleted)*

§ 4.2.5 The apparent low bidder, upon notification, shall provide to the Owner/ Purchasing Office within 24 hours three (3) references of successfully completed projects from General Contractors and/or Construction Managers and/or Owners. Failure to provide these references will be cause to reject the submitted bid.

*(Paragraphs deleted)*

§ 4.2.6 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either

- (a) the Contract has been executed and bonds, if required, have been furnished, or
- (b) the specified time has elapsed so that Bids may be withdrawn or
- (c) all Bids have been rejected.

§ 4.2.7 To protect the public interest the Owner may request a D & B (Dun & Bradstreet ®) report on the apparent low bidder. D & B rating less than A shall be cause for rejection of bid by Owner.

§ 4.2.8 Owner reserves the right to request from apparent low bidder financial statements for the firm for up to 3 fiscal years..

#### § 4.3 SUBMISSION OF BIDS

##### § 4.3.1

*(Paragraphs deleted)*

All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be returned unopened.

§ 4.3.3 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.4 Oral, telephonic, telegraphic, facsimile or other electronically transmitted bids will not be considered.

*(Paragraph deleted)*

#### § 4.4 MODIFICATION OR WITHDRAWAL OF BID

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

§ 4.4.2 Prior to the time and date designated for receipt of Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date and time stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for

*(Paragraphs deleted)*

the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

## ARTICLE 5 CONSIDERATION OF BIDS

### § 5.1 OPENING OF BIDS

At the discretion of the Owner, if stipulated in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be made available to Bidders.

### § 5.2 REJECTION OF BIDS

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

### § 5.3 ACCEPTANCE OF BID (AWARD)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid, Alternate Bids, and proposed Substitutions which, in the Owner's judgment, is in the Owner's own best interests.

§ 5.3.2 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and Alternates accepted.

## ARTICLE 6 POST-BID INFORMATION

*(Paragraphs deleted)*

### § 6.3 SUBMITTALS

§ 6.3.1 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after notification of selection for the award of a Contract, furnish to the Owner through the Architect in writing:

.1

*(Paragraphs deleted)*

names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 Prior to the execution of the Contract, the Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

*(Paragraphs deleted)*

§ 6.3.3 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

## ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

*(Paragraph deleted)*

### §7.1 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1.1 The Contractor shall furnish a Performance Bond and Labor and Materials Payment Bond covering the faithful performance of the Contract and the payment of all obligations arising thereunder and complying with the requirements of

Maryland Law. Both bonds shall be in the amount of one hundred percent (100%) of the Contract amount and shall name the Howard County Board of Education as Obligee.

§ 7.1.2 Bonds shall be written by a bonding company that must be licensed with MD Insurance Administration to do business in the State of Maryland and otherwise acceptable to the Howard County Public School System. The Contractor shall use Bond Forms provided by the Owner AIA Document A312 - 2010 Performance Bond and AIA Document A312 - 2010 Labor and Material Payment Bond, in order to satisfy the Bond requirements referenced in this Article.

§ 7.1.3 Owner reserves the right to request from Contractor financial statements for the firm for up to prior 3 fiscal years.

§ 7.1.4 To protect the public interest the Owner may request a D & B report on the Contractor. Should the D & B rating fall below the awarded rating, Contractor shall advise Owner of his corrective measures.

§ 7.1.5 Firms issuing said bonds must be licensed to write bonds in the State of Maryland. The Contractor shall pay the premiums for required bonds. Obtainage of the required bonds by Contractor shall be a condition precedent to effectuation of the Contract between Owner and Contractor. If additional work is authorized, the amounts of the bonds shall be increased to cover the value of the increased Contract sum. All bonds shall conform to the requirements of the Maryland Little Miller Act. All bonds shall be subject to Owner's approval.

*(Paragraphs deleted)*

§ 7.1.6 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

§ 7.1.7 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

## § 7.2 TIME OF DELIVERY AND FORM OF BONDS

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner with the executed contract and dated with the date of contract. If the Work is to be commenced prior thereto in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312-2010, Performance Bond and Labor and Material Payment Bond. Both bonds shall be written in the amount of the Contract Sum.

*(Paragraph deleted)*

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney effective as of the date of execution of the contract..

## ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101-2007 edition as modified by Howard County Public School System, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment Is a Stipulated Sum.

*(Table deleted)(Paragraphs deleted)(Paragraphs deleted)*

**SECTION 003000  
FORM OF PROPOSAL**

Automotive Lab Renovation at the Howard County Public Schools  
Application and Research Laboratory  
BID #134.23.B4

Date: \_\_\_\_\_

**Owner:** Board of Education  
of Howard County Maryland  
10910 Clarksville Pike  
Ellicott City, MD 21042  
Tel (410) 313-4584  
Fax (410) 313-6789

**Contract Package/Division:** 1A-General

**Contractor:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The undersigned, having carefully examined the Bid Documents for the above reference project, including, but not limited to the "Bid Announcement," "Instructions to Bidders," "General Conditions," "Technical Specifications," "Addenda," and any other related Bid Documents, "do hereby propose to furnish all the necessary labor, materials, equipment and services to perform all of the work required at Wilde Lake High School in strict accordance with the aforesaid documents using only specified manufacturer's materials for the Lump Sum as follows:

**TOTAL BASE BID (WAGE SCALE) FOR THE ENTIRE CONTRACT PACKAGE/DIVISION LISTED ABOVE – EXPRESSED IN WORDS AND FIGURES:**

_____	\$	_____
<b>IN WORDS (Printed Neatly in Ink or Typewritten)</b>		<b>(IN FIGURES)</b>
<b>** In the case of a discrepancy between the total base bid written words and figures, the amount written in words shall govern.</b>		

**ALTERNATE PRICING ITEMS (WAGE SCALE) - State amounts in both Words and Figures**

Special Instructions: Submit a bid on each of the alternates as identified in these Solicitation Documents and listed below. The following Alternate(s) is/are proposed for additional or changes to certain work and should not be included in the base bid total above. Alternate price's should including materials, labor and insurance, machinery, tools, utilities, apparatus and means of performing the work; and all other products or services necessary for the proper design, permitting and construction of the project in the manner set forth, described and shown in these Solicitation Documents. It is understood that this price will be used to determine the cost to alter the work and that these prices include all expenses of every kind involved with or incidental to the alteration of the items below. If selection of the alternate does not alter cost, enter "(zero)" \$0 on the lines. "Not Applicable", "N/A", "No Cost", "NC", and any other denotations other than dollars and cents shall not be used. Lines left blank will be considered a zero cost and inappropriate notations may be considered a Non-Responsive bid.

**Add Alternate No. 1 to the Base Bid – Macadam Parking Area Alternate:**

Alternate: See details under section #004323 – 3.1 Schedule of Alternate No. 1

**(In Words):** \_\_\_\_\_ **Dollars**  
**(In Figures):** \$ \_\_\_\_\_

**FORM CONTINUES ON NEXT PAGE**

**Add Alternate No. 2 to the Base Bid – Sink Area B107** Alternate:

Alternate: See details under section #004323 – 3.1 Schedule of Alternate No. 2

(In Words): \_\_\_\_\_ **Dollars**  
(In Figures): \$ \_\_\_\_\_

**Add Alternate No. 3 to the Base Bid – Light Fixture Replacement** Alternate:

Alternate: See details under section #004323 – 3.1 Schedule of Alternate No. 3

(In Words): \_\_\_\_\_ **Dollars**  
(In Figures): \$ \_\_\_\_\_

**PROPOSED SUBSTITUTE EQUIPMENT**

Proposed substitutions shall be submitted in accordance with Instructions to Bidders, see Section 00100 Instructions to Bidders, Article 3, Bidding Documents, 3.3 Substitutions. Bids will be considered on systems, processes, or products of manufacturers other than those cited if accompanied by detailed technical specifications for each item, catalogs, test reports, brochures, and other descriptive literature and supporting data, sufficient in detail to permit evaluation of the proposed substitution without further reference. The Contractor should list below any proposed substitutions for a piece of equipment. If the piece of equipment is approved by the Engineer, the Contract price will be adjusted by the amount shown. The acceptance or rejection of "Substitute Equipment" **will not** be considered when determining the successful bidder.

<u>SPEC. SECTION</u>	<u>ITEM</u>	<u>SUBSTITUTE MANUFACTURER</u>	<u>ADD OR DEDUCT</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**SUBCONTRACTORS**

Bidders are hereby requested to name the subcontractors as part of their bid package.

<u>Name of Company</u>	<u>Type of Work</u>
_____	_____
_____	_____
_____	_____

**ADDENDA**

Receipt of the following addenda is acknowledged:

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_ Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

**SURVEY**

For information purposes, please advise by what methods you were informed of this solicitation. Your response would be very much appreciated.

E- Maryland Marketplace (Y/N) \_\_\_\_\_ Contractor: \_\_\_\_\_

Ad House: Name of Ad House \_\_\_\_\_ Other: \_\_\_\_\_

**COMPANY INFORMATION**

\_\_\_\_\_  
Name of company \_\_\_\_\_ years in business

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

\_\_\_\_\_  
Telephone # \_\_\_\_\_ Fax # \_\_\_\_\_

\_\_\_\_\_  
Federal ID or Social Security # \_\_\_\_\_ MD Dept. of Assess. Taxation Number

\_\_\_\_\_  
eMaryland Marketplace (emma #) \_\_\_\_\_ MDOT MBE Certification #

**\*\* Please Include a copy of your W-9**

**CONTRACT ADMINISTRATOR**

Print Name \_\_\_\_\_ Title \_\_\_\_\_

Address \_\_\_\_\_ Phone \_\_\_\_\_

\_\_\_\_\_ Fax \_\_\_\_\_

Cell phone \_\_\_\_\_ e-mail \_\_\_\_\_

**FORM CONTINUES ON NEXT PAGE**



## **LIQUIDATED DAMAGES – MINORITY BUSINESS ENTERPRISE PROGRAM**

This contract requires the contractor to make good faith efforts to comply with the Minority Business Enterprise (“MBE”) Program and contract provisions. The Board and the Contractor acknowledge and agree that the Board of Education of Howard County will incur damages, including but not limited to loss of goodwill, detrimental impact on economic development, and diversion of internal staff resources, if the Contractor does not make good faith efforts to comply with the requirements of the MBE Program and MBE contract provisions. The parties further acknowledge and agree that the damages the Board of Education of Howard County might reasonably be anticipated to accrue as a result of such lack of compliance are difficult to ascertain with precision.

Therefore, upon a determination by the Board of Education of Howard County that the Contractor failed to make good faith efforts to comply with one or more of the specified MBE Program requirements or contract provisions, the Contractor agrees to pay liquidated damages to the Board of Education of Howard County at the rates set forth below. The Contractor expressly agrees that the Board of Education of Howard County may withhold payment on any invoices as a set-off against liquidated damages owed. The Contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss the Board of Education of Howard County is anticipated to incur as a result of such violation.

- a. Failure to submit each monthly payment report in full compliance with COMAR 21.11.03.13B (3): \$100.00 per day until the monthly report is submitted as required.
- b. Failure to include in its agreements with MBE subcontractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): \$100.00 per MBE subcontractor.
- c. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule for that specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.
- d. Failure to meet the Contractor’s total MBE participation goal and subgoal commitments: the difference between the dollar value of the total MBE participation commitment on the MBE participation schedule and the MBE participation actually achieved.
- e. Failure to promptly pay all undisputed amounts to an MBE subcontractor in full compliance with the prompt payment provisions of this contract: \$100.00 per day until the undisputed amount due to the MBE subcontractor is paid.

Notwithstanding the use of liquidated damages, the Board of Education of Howard County reserves the right to terminate the contract and exercise all other rights and remedies provided in the contract or by law.

## **WARRANTY TO THE LUMP SUM**

The undersigned affirms that the above Base Bid represents the entire cost of the Project in accordance with the Bid Documents and that no claim will be made on account of any increase in wage, scales, material prices, taxes, insurance, cost indexes or any other rate affecting the construction industry and/or this project.

If the undersigned received written notice of the acceptance, at his designated address, within sixty (60) days after the bid opening (or later if the bid has not been withdrawn), the undersigned agrees to execute and deliver a contract and bonds in accordance with the bid as accepted, within seven (7) days after receiving notice, or forfeit the amount of the bid bond.

## **FORM CONTINUES ON NEXT PAGE**

**AFFIDAVIT**

Special Instructions: An authorized representative of the bidder needs to complete the following affidavit and insert an answer to paragraphs 1 and 3.

**Statutory Affidavit and Non-Collusion Certification:**

I, \_\_\_\_\_, being duly sworn, depose and state:

1. I am the (officer) and duly authorized representative of the firm of the building construction organization named \_\_\_\_\_ whose address is \_\_\_\_\_ and that possess the authority to make this affidavit and certification on behalf of myself and the firm for which I am acting.

2. Except as described in Paragraph 3 below, neither I, nor to the best of my knowledge, the above firm, nor any of its officers, directors, or partners, or any of its employees who are directly involved in obtaining or performing contracts with any public bodies has:

(a) Been convicted of bribery, attempted bribery, or conspiracy to bribe, under the laws of any state or of the federal government;

(b) Been convicted under the laws of the state, another state, or the United States of: a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or fraud, embezzlement, theft, forgery, falsification or destruction of records, or receiving stolen property;

(c) Been convicted of a criminal violation of an antitrust statute of the State of Maryland, another state, or the United States;

(d) Been convicted of a violation of the Racketeer Influenced and Corrupt Organization Act, or the Mail Fraud Act, for acts in connection with the submission of bids or proposals for a public or private contract;

(e) Been convicted of any felony offenses connected with obtaining, holding, or maintaining a minority business enterprise certification, as prohibited by Section 14-308 of the State Finance & Procurement Article;

(f) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction under any of the laws or statutes described in Paragraph (a) through (e) above; or

(g) Been found civilly liable under an antitrust statute of this State, another state, or the United States for acts or omissions in connection with the submission of bids or proposals for a public or private contract.

3. The only conviction, plea, or admission by any officer, director, partner, or employee of this firm to involvement in any of the conduct described in Paragraph 2 above is as follows:

(If none, write "None" below. If involvement, list the date, count, or charge, official or administrative body, the individuals involved, their position with the firm, and the sentence or disposition of the charge.)

---

(you may attach an explanation necessary)

4. I affirm that this firm will not knowingly enter into a contract with a public body under which a person or business debarred or suspended under Maryland State Finance and Procurement Title 16, subtitle 3, Annotated Code of Maryland, as amended, will provide, directly or indirectly, supplies, services, architectural services, construction-related services, leases of real property, or construction.

**FORM CONTINUES ON NEXT PAGE**

5. I affirm that this proposal or bid to the Board of Education of Howard County is genuine and not collusive or a sham; that said bidder has not colluded, conspired, connived and agreed, directly or indirectly, with any bidder or person to put in a sham bid or to refrain from bidding and is not in any manner, directly or indirectly, sought by agreement of collusion or communication or conference, with any person to fix the bid prices of the affidavit or any other bidder, or to fix any overhead, profit or cost element of said bid price, or that if any bidder, or to secure an advantage against the Board of Education of Howard County or any other person interested in the proposed contract; and that all statements in the proposal or bid are true. I acknowledge that, if the representations set forth in this affidavit are not true and correct, the Board of Education of Howard County may terminate any contract awarded and take any other appropriate action.

6. **SEX OFFENDER NOTIFICATION** - Maryland law requires certain sex offenders to register with the local law enforcement agency; See Maryland Annotated Code, Criminal Procurement Article, §11-704. One of the purposes of this law, found in Article 27§ 792, is to inform school systems when a Registered Sex Offender is residing or working in the area. When the sex offender registers, the local police are required to notify the Superintendent of Schools, and the Superintendent, in turn, is required to send a notice to school principals. As a contractor working for Howard County Public School System (HCPSS), we require that you do not employ Registered Sex Offenders to work on projects for our school system if they, as a result, are required to perform delivery, installation, repair, construction or any other kind of services **on HCPSS property**. Further, Maryland Law that became effective June 22, 2006,

requires that any person who enters a contract with a county board of education or a non-public school "may not knowingly employ an individual to work at a school" if the individual is a registered sex offender; See §11-722 Criminal Procurement Article. An employer who violates this requirement is guilty of a misdemeanor and if convicted may be subject to up to five years imprisonment and/or a \$5,000 fine.

Each contractor shall screen their work-forces to ensure that a Registered Sex Offender does not perform work at a county public school and also ensure that a subcontractor and independent contractor conducts screening of its personnel who may work at a school. The term "work force" is intended to refer to all of the contractor's direct employees and subcontractors and/or independent contractors it uses to perform the work. Violations of this provision may cause HCPSS to take action against the contractor up to and including termination of the contract.

Effective July 1, 2015, amendments to § 6-113 of the Education Article of the Maryland Code further require that a contractor or subcontractor for a local school system may not knowingly assign an employee to work on school property with direct, unsupervised, and uncontrolled access to children, if the employee has been convicted of, or pled guilty or nolo contendere to, a crime involving a sexual offense, child sexual abuse and crimes of violence.

The Contractor shall submit to HCPSS a listing of any employees assigned to perform under this agreement and certify that the necessary criminal history records checks have been conducted and that employee complies with the requirements. See section 000740 for Criminal Background Information and forms.

**I/we understand that the project I/we am seeking access to perform requires that I/we am in a school building with access to children. I/we therefore agree to undergo a criminal background check and send that information to a school system designee before receiving full approval. The criminal background check is to determine whether I/we have a record of any violation of laws prohibiting child sexual abuse or crimes of violence. I/we waive any rights such as to allow HCPSS access to that information as a condition to that approval of my request. I/we also understand that the criminal background check will be at my own expense.**

**FORM CONTINUES ON NEXT PAGE**

The statements contained in this affidavit shall be incorporated into the awarded contract as material provisions and shall be effective throughout the life of the contract. The firm has continuing obligation through the life of the contract to submit a revised affidavit should the firm discover information, or events occur, which render the contents of this affidavit erroneous or incomplete or which would result in the firm providing a different response. The firm's failure to submit a revised affidavit within three (3) working days of either its awareness of any error, change of circumstances, incompleteness, etc., or request by the Owner shall constitute breach of contract. Upon submission of a revised affidavit, the Owner has the right to take such actions as may be necessary, in the judgment of the Owner, to maintain and enforce the provisions of the affidavit, including termination of the contract.

**I DO SOLEMNLY DECLARE AND AFFIRM** under the penalties of penalties that the contents of these affidavits (Statutory and Non-Collusion) are true and correct, that I am executing this Affidavit in compliance with Section 16-311 of the State Finance and Procurement Article, Annotated Code of Maryland, and the Non-Collusion Certification in compliance with requirements of the Board of Education of Howard County Maryland, and that I am executing and submitting this Form of Proposal on behalf of and with full authority by the bidder named below.

\_\_\_\_\_  
(Signature of Bidder) (Date)  
\_\_\_\_\_  
(Print Name of Bidder) (Title of Bidder)

SUBSCRIBED AND SWORN to before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

NOTARY PUBLIC

Name \_\_\_\_\_ Seal:

My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
(Legal Name of Company)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City) (State) (Zip)

\_\_\_\_\_  
(Telephone) (Fax)

\_\_\_\_\_  
(E-mail address)

Contractor's License Number # \_\_\_\_\_

We are/ I am licensed to do business in the State of Maryland as a:

( ) Corporation ( ) Partnership ( ) Individual ( ) Other

**FORM CONTINUES ON NEXT PAGE**

**ITEMS FOR BID SUBMISSION**

The bid submission package should include the following:

- \_\_\_\_\_ Form of Proposal – Section 003000 including the following:
  - a) Federal ID or Social Security Number
  - b) MD Dept. of Assess. & Taxation Number
  - c) eMaryland Marketplace (emma #)
  - d) MDOT MBE Certification
  - e) Copy of your W-9
  
- \_\_\_\_\_ Experience / Reference Form (3 References)
- \_\_\_\_\_ Profile of Company Form
- \_\_\_\_\_ Key Personnel Form (Installer)
- \_\_\_\_\_ Key Personnel Form (Technician)
- \_\_\_\_\_ Personnel Form (Quality Assurance Manager)
- \_\_\_\_\_ AIA Doc A-310-2010 Bid Bond – Section 000310 (in the amount of 5%)
- \_\_\_\_\_ Attachment “A” – MBE Utilization & Fair Solicitation Affidavit
- \_\_\_\_\_ Attachment “B” – MBE Participation Schedule

**END OF FORM**

**EXPERIENCE / REFERENCE FORM**

Bidders are hereby required to list three references for whom similar work has been performed within the last three years:

1. Customer Name: \_\_\_\_\_
2. Customer Address: \_\_\_\_\_
3. Contact Name and Title: \_\_\_\_\_
4. Contact Phone #: \_\_\_\_\_
5. Contact E-mail: \_\_\_\_\_
6. Describe customer's facility: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. Describe IPM service performed: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Name your firm's Quality Assurance Manager for service: \_\_\_\_\_  
\_\_\_\_\_
9. Is this contract renewable?    yes     no
10. If yes to the above, was the contract renewed? And if not, why not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. Was service performed on an on-call basis?                      Yes     No
12. Was this fixed price, T & M, lump sum, other: \_\_\_\_\_
13. Annual Dollar amount of contract: \_\_\_\_\_
14. Commencement Date: \_\_\_\_\_ Termination date: \_\_\_\_\_
15. List of all similarities to HCPSS requirements: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Cited references must be able to confirm, without reservation, your company's ability to provide the level of service mandated in this solicitation. Contact information is to be accurate. The Owner will not be responsible for errors, non-working numbers or persons that are no longer employed by the firm or do not respond. Howards County Board of Education reserves the right to reject any bid based on an unsatisfactory reference. The Board of Education also reserves the right to request additional references as needed.

**Note:** This form must be completed for three (3) References.

**PROFILE OF COMPANY FORM**

Comprehensive Description of Organization

Complete for local office which will be performing The Howard County Public School System work.

Company Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
Company Address: \_\_\_\_\_ Fax #: \_\_\_\_\_  
\_\_\_\_\_ E-mail: \_\_\_\_\_  
\_\_\_\_\_ Web Page: \_\_\_\_\_

Date of Incorporation: \_\_\_\_\_ State of Incorporation: \_\_\_\_\_

State of Maryland Contractors License number: \_\_\_\_\_

Number of Years in business under present name: \_\_\_\_\_

Other or former names under which your organization has operated: \_\_\_\_\_

Percent (%) of Work Performing:	_____	Services (new installation)	_____ %
	_____	Services (upgrades)	_____ %
	_____	Services (maintenance)	_____ %
	_____	other service	_____ %

Name of Principal(s) and Title(s):  
\_\_\_\_\_  
\_\_\_\_\_

History of Firm: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total Number of Employees: \_\_\_\_\_ Number of Office Personnel: \_\_\_\_\_  
Number of Field Technicians: \_\_\_\_\_ Number of Installers: \_\_\_\_\_

Bonding capacity: \_\_\_\_\_

Has your firm, in the last five years, ever had a contract terminated for any reason? Yes  No

If Yes, Explain: \_\_\_\_\_  
\_\_\_\_\_

Total Company Annual Dollar Volume for all Security System Contractor work:  
2022 \$ \_\_\_\_\_ 2021 \$ \_\_\_\_\_ 2020 \$ \_\_\_\_\_

**KEY PERSONNEL FORM**

**STAFFING PLAN – Installer**

Bidder: \_\_\_\_\_

Phone #: \_\_\_\_\_

Installer: \_\_\_\_\_  
(Name)

Fax #: \_\_\_\_\_

Cell#: \_\_\_\_\_

Email: \_\_\_\_\_

**TECHNICAL TRAINING/EDUCATIONAL BACKGROUND:**

<u>Association/Institution</u>	<u>Licenses/Certifications</u>	<u>Date Earned</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number of years with previous firm: \_\_\_\_\_

Number of years as a full time employee

Name of previous firm: \_\_\_\_\_

with present firm: \_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

List similar projects worked on and particular role this individual had during each project:

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

It is imperative that accurate contact names and phone numbers be given for the references listed. All references are to include a contact person who can comment on the Installer's ability to perform work such as is specified in the bid documents.

**Note:** This form must be completed for three (3) security system installation/maintenance technicians.



**KEY PERSONNEL FORM**

**STAFFING PLAN –Technician**

Bidder: \_\_\_\_\_

Phone #: \_\_\_\_\_

Fax #: \_\_\_\_\_

Technician: \_\_\_\_\_  
(Name)

Cell#: \_\_\_\_\_

Email: \_\_\_\_\_

**TECHNICAL TRAINING/EDUCATIONAL BACKGROUND:**

Association/Institution                      Licenses/Certifications                      Date Earned

_____	_____	_____
_____	_____	_____
_____	_____	_____

Number of years with previous firm: \_\_\_\_\_

Number of years as a full time employee

Name of previous firm: \_\_\_\_\_

with present firm: \_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

List similar projects worked on and particular role this individual had during each project:

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

It is imperative that accurate contact names and phone numbers be given for the references listed. All references are to include a contact person who can comment on the Technician's ability to perform work such as is specified in the bid documents.

**KEY PERSONNEL FORM**

**STAFFING PLAN – Quality Assurance Manager**

Bidder: \_\_\_\_\_

Phone #: \_\_\_\_\_

Fax #: \_\_\_\_\_

Project Manager: \_\_\_\_\_  
(Name)

Cell#: \_\_\_\_\_

Email: \_\_\_\_\_

**TECHNICAL TRAINING/EDUCATIONAL BACKGROUND:**

<u>Association/Institution</u>	<u>Licenses/Certifications</u>	<u>Date Earned</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number of years with previous firm: \_\_\_\_\_

Number of years as a full time employee

Name of previous firm: \_\_\_\_\_

with present firm: \_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Positions held for the  
past three years: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

List similar projects worked on and particular role this individual had during each project:

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Customer Name: \_\_\_\_\_
- Contact Name and Title: \_\_\_\_\_
- Address: \_\_\_\_\_ Phone #: \_\_\_\_\_
- Position held: \_\_\_\_\_
- Specific work performed: \_\_\_\_\_
- Brief description of project \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

It is imperative that accurate contact names and phone numbers be given for the references listed. All references are to include a contact person who can comment on the Project Manager's ability to perform work such as is specified in the bid documents.

PROJECT: \_\_\_\_\_

PSC#: \_\_\_\_\_

**Attachment A (page 1 of 2)**

**WAGE SCALE**

**CERTIFIED MINORITY BUSINESS ENTERPRISE  
UTILIZATION AND FAIR SOLICITATION AFFIDAVIT**

**NOTE: You must include this document with your bid or offer. If you do not submit the form with your bid or offer, the procurement officer shall deem your bid non-responsive or your offer not reasonably susceptible of being selected for award.**

\* \* \* \* \*

**Part I.**

I acknowledge the:

- Overall certified MBE subcontract participation goal of \_\_\_\_ %.
- The subgoals, if applicable, of:
  - \_\_\_\_ % for certified African American-owned businesses and
  - \_\_\_\_ % for certified Asian American-owned businesses.

I have made a good-faith effort to achieve this goal. If awarded the contract, I will continue to attempt to increase MBE participation during the project.

**Part II.**

Check ONE Box

**NOTE: FAILURE TO CHECK ONE OF BOXES 1, 2, or 3 BELOW WILL RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

**NOTE: INCONSISTENCY BETWEEN THE ASSERTIONS ON THIS FORM AND THE INFORMATION PROVIDED ON THE *MBE PARTICIPATION SCHEDULE* (ATTACHMENT B) MAY RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

- 1  I have met the overall MBE goal and MBE subgoals for this project. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details how I will reach that goal.
- or**
- 2  After having made a good-faith effort to achieve the overall MBE goal and MBE subgoals for this project, I can achieve partial success only. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details the MBE participation I have achieved.

I request a partial waiver as follows:

- Waiver of overall MBE subcontract participation goal: \_\_\_\_ %
- Waiver of MBE subcontract participation subgoals, if applicable:
  - \_\_\_\_ % for certified African American-owned businesses and
  - \_\_\_\_ % for certified Asian American-owned businesses.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

or

- 3  After having made a good faith effort to achieve the overall MBE goal and MBE subgoals for this project, I am unable to achieve any portion of the goal or subgoals. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B].

I request a full waiver.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

### Part III.

I understand that if I am the apparent awardee or conditional awardee, I must submit **within 10 working days** after receiving notice of the potential award or within 10 days after the date of conditional award – whichever is earlier – the:

- *Outreach Efforts Compliance Statement* (Attachment C)
- *Subcontractor Project Participation Statement* (Attachment D)
- *Minority Subcontractors Unavailability Certificate* (Attachment E) (if applicable)
- Any other documentation the Procurement Officer requires to ascertain my responsibility in connection with the MBE participation goal and subgoals

I acknowledge that if I fail to timely return complete documents, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has been awarded, the award is voidable.

I acknowledge that the MBE subcontractors/suppliers listed in the *MBE Participation Schedule* and any additional MBE subcontractor/suppliers identified in the *Subcontractor Project Participation Statement* will be used to accomplish the percentage of MBE participation that I intend to achieve.

In the solicitation of subcontract quotations or offers, MBE subcontractors were provided the same information and amount of time to respond as were non-MBE subcontractors.

The solicitation process was conducted in such a manner so as to not place MBE subcontractors at a competitive disadvantage to non-MBE subcontractors.

**I solemnly affirm under the penalties of perjury that this Affidavit is true to the best of my knowledge, information, and belief.**

\_\_\_\_\_  
Bidder/Offeror Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address (continued)

\_\_\_\_\_  
Affiant Signature

\_\_\_\_\_  
Printed Name & Title

\_\_\_\_\_  
Date

**ATTACHMENT B**  
**WAGE SCALE**  
**MBE PARTICIPATION SCHEDULE**

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

1. Prime Contractor's Name		2. Prime Contractor's Address/Telephone Number		
3. Project/School Name		4. Project/School Location		
5. LEA Name:  PSC Number:		6. Base Bid Amount \$ _____ Acceptance Alternates \$ _____  Total \$ _____		
7a. Minority Firm Name: _____ Minority Firm Address: _____ Telephone Number: _____ MDOT Firm Certification Number: _____ NAICS Code: _____ <input type="checkbox"/> African American <input type="checkbox"/> Asian American <input type="checkbox"/> Native American <input type="checkbox"/> Women <input type="checkbox"/> Hispanic <input type="checkbox"/> Disabled				
Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____
7b. Minority Firm Name: _____ Telephone Number: _____ Minority Firm Address: _____ NAICS Code: _____ MDOT Firm Certification Number: _____ <input type="checkbox"/> African American <input type="checkbox"/> Asian American <input type="checkbox"/> Native American <input type="checkbox"/> Women <input type="checkbox"/> Hispanic <input type="checkbox"/> Disabled				
Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____
7c. Minority Firm Name: _____ Telephone Number: _____ Minority Firm Address: _____ NAICS Code: _____ MDOT Firm Certification Number: _____ <input type="checkbox"/> African American <input type="checkbox"/> Asian American <input type="checkbox"/> Native American <input type="checkbox"/> Women <input type="checkbox"/> Hispanic <input type="checkbox"/> Disabled				
Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____
8. MBE Total Amount		9. Total MBE Percent of Entire Contract		
10. Form Prepared by: Name: _____ Title: _____ Date: _____		11. Reviewed and Accepted by Board of Edu. MBE Liaison Name: _____ Title: _____ Date: _____		

Total MBE Participation:	\$ _____	_____ %
Total African-American Participation:	\$ _____	_____ %
Total Asian-American MBE Participation:	\$ _____	_____ %
Total Other Participation:	\$ _____	_____ %

# AIA<sup>®</sup> Document A310<sup>™</sup> – 2010

## **Bid Bond**

**CONTRACTOR:**

*(Name, legal status and address)*

*(Row deleted)*

As Principal, hereinafter called the Principal, and a corporation duly organized under the laws of the State of as Surety, hereinafter called the Surety, are held and firmly bound unto

*(Paragraphs deleted)*

As Oblige, hereinafter called the Oblige, in the sum of Dollars (\$ )  
\$....., for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, or heirs, executors, administrators, successors and assigns jointly and severally firmly by these presents.

**OWNER**

Howard County Public School System  
10910 Clarksville Pike  
Ellicott City, MD, 21043

WHEREAS the Principal has submitted a bid for

**PROJECT:**

*(Name, location or address, and Project number, if any)*

**ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.



# AIA® Document A101® – 2017

## Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the \_\_\_\_\_ day of \_\_\_\_\_ in the year 2021  
(In words, indicate day, month and year)

BETWEEN the Owner:  
(Name, address and other information)

and the Contractor:  
(Name, address and other information)

for the following Project:  
(Name, location and detailed description)

The Architect:  
(Name, address and other information)

The Owner and Contractor agree as follows.  
**TABLE OF ARTICLES**

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS
- 10 INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

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User Notes:

(1416974200)



issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

**ARTICLE 2 THE WORK OF THIS CONTRACT**

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

Contract Package:

Alternate No.:

**ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

§ 3.1 The date of commencement of the Work shall

*(Paragraphs deleted)*

be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Paragraphs deleted)*

§ 3.2 The Contract Time shall be measured from the date of commencement, that shown on the Progress Schedule.

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ..... The respective dates applicable to this Contract as indicated on the Progress Schedule. The fully developed Progress Schedule issued by Architect/Owner, and hereby fully incorporated into this Agreement, contains

**Portion of Work**  
100 % Complete

, subject to adjustments of this Contract Time as provided in the Contract Documents.  
. Liquidated Damages in the sum of one thousand (\$1000.00) for each calendar day shall be assessed for any delays in achieving Substantial Completion, except as noted in Article 8 of the General Conditions of the Contract for Construction. "Substantial Completion" as defined in Article 9.8 of the General Conditions of the Contract for Construction. In addition to Liquidated Damages for delay, as provided above, the Owner shall be entitled to such other damages for breach of contract as more fully provided in the General Conditions for Contract for Construction.

*(Paragraph deleted)*

*(Table deleted)*

*(Paragraphs deleted)*

**ARTICLE 4 CONTRACT SUM**

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract including Alternates and Substitutions the Contract Sum shall be:

\$... .. (\$),

subject to additions and deductions as provided in the Contract Documents.

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

Alternate Numbers:

N/A

init.

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

(Table deleted)  
(Paragraphs deleted)  
(Table deleted)  
(Paragraph deleted)

**§ 4.3** Unit prices, if any:

(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

**Item**

As listed in the Form of Proposal;

(Paragraphs deleted)  
(Table deleted)  
(Paragraphs deleted)

**ARTICLE 5 PAYMENTS**

**§ 5.1 PROGRESS PAYMENTS**

**§ 5.1.1** Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 5.1.2** The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

Contractor shall submit to the Architect on the last day of each month a draft of a Standard Monthly Contractors Requisition for Payment, on AIA Document G702 – 1992 and AIA Document G703 – 1992

(Paragraphs deleted)

**§ 5.1.5** Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

**§ 5.1.6** Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of ten percent ( 10 % )
- .2 Portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of ten percent ( 10 % );

(Paragraphs deleted)

**§ 5.1.7 Deleted**

(Paragraphs deleted)

**§ 5.1.8** Reduction or limitation of retainage, if any, shall be as follows:

As described in the General Conditions for the Contract of Construction.

Init.

§ 5.1.9 Deleted

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor in accordance with Paragraph 9.10 of the General Conditions for Contract.

§ 5.2.2 Deleted

*(Paragraphs deleted)*

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1

*(Paragraphs deleted)*

As specified in Contract Documents

*(Paragraphs deleted)*

§ 6.2 Deleted

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201-2007 and modifications made by Howard County Public School System.

*(Paragraphs deleted)*

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201-2007 and modifications made by Howard County Public School System.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201-2007 and modifications made by Howard County Public School System or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

*(Paragraphs deleted)*

§ 8.4 The Contractor's representative:

*(Name, address and other information)*

§ 8.5 The Contractor's representative shall not be changed without ten days' written notice to the Owner

*(Paragraphs deleted)*

§ 8.6 Delete:

Init.

*(Paragraphs deleted)*

**ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS**

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is the executed Standard Form of Agreement Between Owner and Contractor, AIA Document A101-1997 and modifications made by Howard County Public School System.

§ 9.1.2 The General Conditions are the 2007 edition of the General Conditions of the Contract for Construction, AIA Document A201-2007 and modifications made by Howard County Public School System.

§ 9.1.3 Delete

§ 9.1.4 The Specifications:

*(Paragraph deleted)*

The Specifications are those contained in the Project Manual, and are as follows:

Title of Specifications exhibit: As listed in Table of Contents of Project Manual dated:

§ 9.1.5 The Drawings:

The Drawings are as follows, and are dated \_\_\_\_\_ unless a different date is shown below:

*(Table deleted)*

Title of Drawings exhibit: As listed in the Schedule of Drawings of the Contract Title of Drawings exhibit:

*(Table deleted)*

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

*(Paragraph deleted)*

As listed in the Project Manual.

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

**Type of insurance or bond**

As listed in the Project Manual

*(Paragraphs deleted)*

Init.

This Agreement is entered into as of the day and year first written above and is executed in at least four original copies of which one is to be delivered to the Contractor, one each to the Construction Manager and Architect for use in the administration of the Contract, and the remainder to the Owner.

**OWNER**

Board of Education of Howard County

(A Body Politic and Corporate)

**CONTRACTOR**

\_\_\_\_\_  
*(Signature)*

\_\_\_\_\_  
*(Signature)*

Chao Wu, Chair (SEAL)  
\_\_\_\_\_

\_\_\_\_\_  
*(Printed name and title)* (SEAL)

Approved by:

\_\_\_\_\_  
Michael J. Martirano, Ed. D., Superintendent of Schools

Init.

**SECTION 000601**  
**INSURANCE REQUIREMENTS**

**1 - General Insurance Requirements:**

1.1 - The Contractor shall not commence Work until he has obtained at his own expense all of the insurance as required hereunder and such insurance has been approved by the Board of Education of Howard County Maryland; nor shall the Contractor allow any Subcontractor to commence Work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved by the Contractor. Approval of insurance required of the Contractor will be granted only after submission to the Board of Education of Howard County Maryland of original, signed certificates of insurance or, alternately, at the Board of Education of Howard County Maryland's request, certified copies of the required insurance policies.

1.2 - The Contractor shall require all Subcontractors to maintain during the term of this agreement, commercial general liability insurance, business automobile liability insurance, and Workers' Compensation and employers' liability insurance, in the same manner as specified for the Contractor. The Contractor shall furnish Subcontractors' certificates of insurance to the Board of Education of Howard County Maryland immediately upon request.

1.3 - All insurance required hereunder shall include the following provision: "It is agreed that this policy is not subject to cancellation, non-renewal, material change, or reduction in coverage until sixty (60) days prior written notice has been given to the Board of Education of Howard County Maryland."

The phrases "endeavor to" and "... but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" are to be eliminated from the cancellation provision of standard ACORD certificates of insurance.

1.4 - No acceptance and/or approval of any insurance by the Board of Education of Howard County Maryland shall be construed as relieving or excusing the Contractor, or the Surety, or his bonds, from any liability or obligation imposed upon either or both of them by the provisions of the Contract Documents.

1.5 - The Board of Education of Howard County Maryland and its elected or appointed officials, agents and employees are to be named as an additional insured under all coverages except Workers compensation and business automobile liability, and the certificate of insurance, or the certified policy, if requested, must so state this. Coverage afforded under this paragraph shall be primary as respects the Board of Education of Howard County Maryland, its agents and employees.

1.6 - The Contractor shall be responsible for the Work performed under the Contract Documents and every part thereof, and for all materials, tools, equipment, appliances, and property of any and all description used in connection with the Work. The Contractor assumes all risk for direct and indirect damage or injury to the property or persons used or employed on or in connection with the Work contracted for, and of all damage or injury to any person or property wherever located, resulting from the action, omission, commission or operation under the contract, or in connection in any way whatsoever with the contracted Work, until final acceptance of the Work by the Board of Education of Howard County Maryland.

1.7 - Insurance coverage required in these specifications shall be in force throughout the contract term. Should the Contractor fail to provide acceptable evidence of current insurance within seven days of written notice at any time during the contract term, the Board of Education of Howard County Maryland shall have the absolute right to terminate the contract without any further obligation to the Contractor, and the Contractor shall be liable to the Board of Education of Howard County Maryland for the entire additional cost of procuring performance and the cost of performing the incomplete portion of the contract at time of termination.

1.8 - Contractual and other liability insurance provided under this contract shall not contain a supervision, inspection or engineering services exclusion that would preclude the Board of Education of Howard County Maryland from supervising or inspecting the project as to the end result. The Contractor shall assume all

on-the-job responsibilities as to the control of persons directly employed by it and of the Subcontractors and any persons employed by the Subcontractor.

1.9 - Nothing contained in the specifications shall be construed as creating any contractual relationship between any Subcontractor and the Board of Education of Howard County Maryland. The Contractor shall be fully responsible to the Board of Education of Howard County Maryland for the acts and omissions of the Subcontractors and of persons employed by them as it is for acts and omissions of persons directly employed by it.

1.10 - Precaution shall be exercised by the Contractor at all times for the protection of persons, (including employees) and property. All existing structures, utilities, roads, services, trees and shrubbery shall be protected against damage or interruption of service at all times by the Contractor and its Subcontractors during the term of the contract, and the Contractor shall be held responsible for any damage to property occurring by reason of its operation on the property.

1.11 - If the Contractor does not meet the insurance requirements of the specifications, alternate insurance coverage, satisfactory to the Board of Education of Howard County Maryland, may be considered. Written requests for consideration of alternate coverages must be received by the Board of Education of Howard County Maryland at least ten Working days prior to the date set for receipt of bids or proposals. If the Board of Education of Howard County Maryland denies the request for alternate coverages, the specified coverages will be required to be submitted.

1.12 - All required insurance coverages must be acquired from insurers allowed to do business in the State of Maryland and acceptable to the Board of Education of Howard County Maryland. The insurers must also have a policyholders' rating of "A-" or better, and a financial size of "Class VII" or better in the latest edition of Best's Insurance Reports, unless the Board of Education of Howard County Maryland grants specific approval for an exception.

1.13 - The Board of Education of Howard County Maryland will consider any deductible amounts as part of its review of the financial stability the Contractor. Any deductibles shall be disclosed by the Contractor, and deductible amounts are the responsibility of the Contractor.

## **2 - Contractor's Liability Insurance - "Occurrence" Basis:**

2.1 - The Contractor shall purchase the following insurance coverages:

2.1.1 - Commercial general liability with a minimum limit of \$1,000,000 per occurrence, \$1,000,000 annual aggregate including all of the following:

- i. General aggregate limit is to apply per project;
- ii. Premises/operations;
- iii. Actions of independent Contractors;
- iv. Products/completed operations to be maintained for two years after completion of the Work;
- v. Contractual liability including protection for the Contractor from claims arising out of liability assumed under this contract;
- vi. Personal injury liability including coverage for offenses related to employment;
- vii. Explosion, collapse, or underground (XCU) hazards (confirmation of underground hazard coverage must be confirmed by either certificate of insurance or in writing by Contractor's agent, broker or insurer);

2.1.2 - Business automobile liability including coverage for any owned, hired, or non-owned motor vehicles and automobile contractual liability with a limit of \$1,000,000 per accident; uninsured motorist coverage at minimum statutory limits.

2.1.3 - Workers compensation with statutory benefits as required by Maryland law or the U. S. Longshoremen's and Harbor Workers' Compensation Act, or other laws as required by labor union agreements, including standard other states coverage; employers' liability coverage with limits of \$100,000 per accident, \$100,000 per employee for disease, and a \$500,000 disease policy limit.

2.1.4 - Total limit requirements of 2.1.1, 2.1.2 and 2.1.3 may be met by a combination of primary and umbrella excess liability coverage.

2.1.5 - Aircraft liability including coverage for any owned, hired or non-owned aircraft utilized in the project (e.g. installation of HVAC unit on school roof) with a minimum limit of \$ NA per occurrence applicable to aircraft while in flight or in motion. A higher limit may be required by the Board of Education of Howard County Maryland upon exposure review.

### **3 - Commercial General or Other Required Liability Insurance - "Claims Made" Basis**

3.1 - If commercial general or other liability insurance purchased by the Contractor has been issued on a "claims made" basis, the Contractor must comply with the following additional conditions:

- i. Agree to provide certificates of insurance evidencing the above coverages for a period of two years after final payment for the contract. Such certificates shall evidence a retroactive date, no later than the beginning of the Contractors' or Subcontractors' Work under this contract, or
- ii. Purchase an extended (minimum two years) reporting period endorsement for the policy or policies in force during the term of this contract and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself.



# AIA<sup>®</sup> Document A312<sup>™</sup> – 2010

## Performance Bond

**CONTRACTOR:**  
*(Name, legal status and address)*

**SURETY:**  
*(Name, legal status and principal place of business)*

---

**OWNER:**  
*(Name, legal status and address)*

### CONSTRUCTION CONTRACT

**Date:**  
**Amount: \$**  
**Description:**  
*(Name and location)*

**BOND**  
**Date:**  
*(Not earlier than Construction Contract Date)*

**Amount: \$**  
**Modifications to this Bond:**  **NONE**  **SEE SECTION 16**

**CONTRACTOR AS PRINCIPAL**  
**COMPAN (CORPORATE SEAL)**  
**Y:**

**SURETY**  
**COMPAN (CORPORATE SEAL)**  
**Y:**

**SIGNATU**  
**RE:** \_\_\_\_\_  
**NAME**  
**AND**  
**TITLE:**

**SIGNATU**  
**RE:** \_\_\_\_\_  
**NAME**  
**AND**  
**TITLE:**

**IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS PREPARED BY:**  
**(HERE INSERT FULL NAME AND ADDRESS OR LEGAL TITLE OF ARCHITECT)**

*(Table deleted)*

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

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

**PERFORMANCE BOND**

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The surety hereby waives notice of any alteration of extension of time made by the Owner.

Whenever Contractor shall be, and declare by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

1. Complete the contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for competing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this day of

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Principal)

(Seal)

\_\_\_\_\_  
(Witness)

(Title)

*(Table deleted)(Paragraphs deleted)*



**AIA**<sup>®</sup>

# Document A312™ – 2010

## Payment Bond

**CONTRACTOR:**

*(Name, legal status and address)*

**SURETY:**

*(Name, legal status and principal place of business)*

**OWNER:**

*(Name, legal status and address)*

**CONSTRUCTION CONTRACT**

Date:

Amount: \$

Description:

*(Name and location)*

**BOND**

Date:

*(Not earlier than Construction Contract Date)*

Amount: \$

Modifications to this Bond:  None  See Section 18

**CONTRACTOR AS PRINCIPAL**

Company *(Corporate Seal)*

:

Signature

:

Name

and Title:

*(Any additional signatures appear on the last page of this Payment Bond.)*

**SURETY**

Company *(Corporate Seal)*

:

*(Row deleted)*

Signature

:

Name

and Title:

**ADDITIONS AND DELETIONS:**

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Init.

User Notes:

(963540855)

Drawings and Specifications prepared by:  
(Architect name and address)

**§ 1** The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

**§ 2** If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

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

### **LABOR AND MATERIAL PAYMENT BOND**

Now therefore, the condition of this obligation is such that, if Principal shall promptly make payment to all claimants as hereinafter defined. For all labor and material used or presumably 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 Subcontractor 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 which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, prosecute the suit for 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 on 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 seaside 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 with 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.

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

Company: \_\_\_\_\_ (Corporate Seal)

**SURETY**

Company: \_\_\_\_\_ (Corporate Seal)

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_

Address:

Address:

*(Table deleted)(Paragraphs deleted)*

# AIA<sup>®</sup> Document A201<sup>®</sup> – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

[Redacted]

THE OWNER:

(Name and address)

[Redacted]

THE ARCHITECT:

(Name and address)

[Redacted]

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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## **ARTICLE 1 GENERAL PROVISIONS**

### **§ 1.1 BASIC DEFINITIONS**

#### **§ 1.1.1 THE CONTRACT DOCUMENTS**

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

#### **§ 1.1.2 THE CONTRACT**

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### **§ 1.1.3 THE WORK**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### **§ 1.1.4 THE PROJECT**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

#### **§ 1.1.5 THE DRAWINGS**

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### **§ 1.1.6 THE SPECIFICATIONS**

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### **§ 1.1.7 INSTRUMENTS OF SERVICE**

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### **§ 1.1.8 INITIAL DECISION MAKER**

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

### **§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS**

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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**§ 1.2.2** Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Wherever in the Specifications there appears a reference to a "Contractor" or the "Subcontractor" or a reference to a Contractor, installer or supplier of a particular trade, or for a particular type of Work, such reference, regardless of the language hereof shall be deemed a reference to the Contractor and shall not be construed as relieving the Contractor from the duty to perform all of the Work and other obligations provided under the Contract.

**§ 1.2.3** Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

**§ 1.3 CAPITALIZATION**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

**§ 1.4 INTERPRETATION**

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

**§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE**

**§ 1.5.1** The Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings.. Unless otherwise indicated, the Architect shall be deemed the author of the Specifications and other documents prepared by the Architect. All copies of Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Owners copyrights or other reserved rights. The Drawings, Specifications, and other documents are and shall always be the property of the Owner, and the Owner shall retain all common law, statutory, and other reserved rights in addition to copyright.

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

**§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM**

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

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## ARTICLE 2 OWNER

### § 2.1 GENERAL

§ 2.1.1 The Owner is the Board of Education of Howard County Maryland identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Contractor understands that the Board of Education of Howard County, Maryland, is a public agency, and no mechanics' liens are permitted against its property.

### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Deleted

§ 2.2.2 Except for permits and fees, including those required under Section 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction,

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site to the extent reasonably required for execution of the Work and requested by the Contractor in writing within one (1) month of the date of Contract. The Owner does not warrant or undertake responsibility for the location of utilities or the accuracy of tests concerning the soil, surface, and subsurface conditions.

§ 2.2.4 Information or services under the Owner's control shall, be furnished by the Owner after receipt from the Contractor of a written request for such information or services..

*(Paragraph deleted)*

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, Three (3) sets of copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

### § 2.3 OWNER'S RIGHT TO STOP THE WORK

§2.3.1 If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3. This right shall be in addition to an not in restriction or derogation of the Owners' rights under Section 4.3.4 and under Article 14 of the General Conditions.

§2.3.2 If unforeseen conditions occur or are encountered which may substantially impair the quality of the Work unless the Work is suspended, the Owner may suspend the Work by notice in writing to the Contractor. In the event of such a suspension, Contractor shall be entitled only to payment for work actually completed up to and including the date on which the work was suspended by the Owner. In any event where the Contractor reasonably determines that a suspension is required in such circumstances, the Contractor shall promptly notify in writing the Owner and Architect of such determination. In the event the Owner agrees to suspend the work, the Contractor shall only be entitled to payment for work actually completed up to and including the date on which the work was suspended.

### § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

§ 2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, upon written notice to the Contractor at the

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conclusion of the above referenced seven day period without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. , upon written notice to the Contractor at the conclusion of the above referenced seven-day period, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's and their respective consultants' additional services and expenses made necessary by such default, neglect or failure. At the election of the Owner, the first written notice to the Contractor to correct defective work may also contain written notice that if the defective work or other specified cause for termination is not corrected, cured, or remedied to Owner's satisfaction, then Owner may issue a written notice to Contractor at the end of the above reference seven (7) day period terminating the Contractor's employment under the Contract pursuant to Article 14 of these General Conditions. In the event the Owner elects to terminate the Contractor's employment under this Contract, the Contractor shall only be entitled to payment for work under the Agreement actually completed by the Contractor up to the date of Contractor's termination, less deductions for: (1) the cost of correcting any deficient or defective work, including compensation for the Architect and their respective consultant's additional services and expenses made necessary by the Contractor's defective work, default, neglect, or failure to perform under this Contract; (2) damages incurred by the Owner as a result of the Contractor's breach, including but not limited to costs to finish the work and damages for delay, if any, in completing the work under the Contract; and (3) actual reasonable attorney's fees incurred by the Owner in obtaining legal advice, counsel, and/or representation relating to the issues of Contractor's breach of contract, defective work, default neglect, or failure to perform and Owner's legal options relating thereto as well as any other reasonable attorney's fees due to Owner under other provisions of this Contract; and (4) such other amounts due and owing to Owner under the terms and conditions of the Contract documents. In the event the Contractor is terminated pursuant to Article 14.2, the Contractor shall not be entitled to any remaining funds under the Contract after the date of termination except as specifically provided above, and subject to the availability of funds after all work is completed. All remaining unpaid funds in the Contract as of the Contractor's termination date shall be the sole and exclusive property of the Owner, and the Contractor shall be paid by the Owner at the conclusion of all work under the Contract as provided above, but only to the extent that there are funds remaining after all payments have been made to complete the work under the Contract and to compensate the Owner as provided above in the four (4) enumerated deductions in this Article 2.4.1. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

### **ARTICLE 3 CONTRACTOR**

#### **§ 3.1 GENERAL**

**§ 3.1.1 .1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative. When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the contractor who executes each separate Contractor Agreement.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

**§ 3.1.3** The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

#### **§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

**§ 3.2.1** The Contractor warrants that it has made itself familiar with the Project site and obtained all information required by the Contractor concerning the conditions of the Project site including but not limited to soil, surface, and subsurface conditions, legal descriptions and surveys of the Project site, and the location of utilities and the improvements to be constructed. The Contractor shall continue to carefully study and compare the Contract Documents with each other and with information obtained by Contractor by his own investigation and tests and shall at once report to the Owner and Architect errors, inconsistencies, or omissions discovered. These obligations are for

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the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the Architect as a request for information in such form as the Architect may require. If the Contractor performs any construction activity with either actual knowledge or constructive knowledge that it involves an error, inconsistency, or omission in the Contract Documents, the Contractor shall assume liability for such performance and costs for correction.

§ 3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Architect, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Architect. If the Contractor performs any construction activity with either actual knowledge or constructive knowledge that it involves an error, inconsistency, or omission in the Contract Documents, the Contractor shall assume liability for such performance and costs for correction.

§ 3.2.3 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Architect, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Architect. If the Contractor performs any construction activity with either actual knowledge or constructive knowledge that it involves an error, inconsistency, or omission in the Contract Documents, the Contractor shall assume liability for such performance and costs for correction.

§ 3.2.4 Delete.

### § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, . The Contractor shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents by activities or duties of the Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

§ 3.3.4 All inspections required by law shall be obtained by the Contractor, including but not limited to those required by law to be obtained by the Owner, and no failure of the Owner to obtain such inspection shall constitute a waiver of Contractor's obligation hereunder. The Contractor shall notify the Owner of any application for inspection required to be executed by the Owner.

### § 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Delete

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§3.4.4 By law, all school sites are drug, alcohol, and tobacco free, and Contractor shall ensure that all workers on the job site comply with the said law.

### § 3.5 WARRANTY

§ 3.5.1 The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of excellent quality and new unless otherwise required or permitted by the Contract Documents, that the Work shall be performed in an excellent manner and shall be free from defects, and that the Work shall conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. The Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### § 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received, whether or not yet effective or merely scheduled to go into effect.

### § 3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received. The Owner will not reimburse the Contractor for the cost of elective permits, which the Contractor chooses to secure in conjunction with its means and methods of executing the work, or for any offsite permits.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 The Contractor shall review the Contract Documents to ascertain that the Contract Documents are to the best of the Contractor's knowledge in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. The Contractor shall promptly notify the Architect and Owner in writing, of any variance therewith, and necessary changes shall be accomplished by appropriate Modification.

§ 3.7.4 If the Contractor performs Work contrary to laws, statutes, ordinances, building codes, and rules and regulations, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

*(Paragraph deleted)*

### § 3.8 Deleted

*(Paragraphs deleted)*

### § 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Project conference meeting minutes shall constitute Owner's request in writing. The Owner shall have the right to require the Contractor

to replace any superintendent whose performance the Owner deems to be unsatisfactory, and the Contractor's failure to do so within seven (7) days of having received written notice from the Owner as to the Superintendent's unsatisfactory performance shall constitute a breach of Article 14.2.1, thereby giving the Owner the right to terminate the Contractor's employment under this Contract.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### **§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall promptly prepare and submit for the Owner's and Architect's approval a proposed Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, but shall not extend the original completion date and shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 3.10.2** The Contractor shall prepare and keep current, for the Architect's/Owners review, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals.

*(Paragraph deleted)*

### **§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE**

The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner in good condition upon completion of the Work and before final payment is made and shall be executed by the Contractor certifying that they have been kept in accordance with the provisions of this subparagraph and accurately reflect the construction of the Work as built.

### **§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

**§ 3.12.2** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**§ 3.12.3** Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

**§ 3.12.4** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect without action.

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§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

### § 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### § 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor

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except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### **§ 3.15 CLEANING UP**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

*(Paragraph deleted)*

**§3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 ACCESS TO WORK**

The Contractor shall provide the Owner and Architect and Owner engaged Testing Agencies access to the Work in preparation and progress wherever located.

### **§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### **§ 3.18 INDEMNIFICATION**

**§ 3.18.1** To the fullest extent permitted by law and to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor. The Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to reasonable attorneys' fees and litigation expenses incurred by the Owner, and arising out of or resulting from performance of the Work, defective work, default, neglect, and or failure to perform under the Contract. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## **ARTICLE 4 ARCHITECT**

### **§ 4.1 GENERAL**

**§ 4.1.1** The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Engineer or the Architect's or Engineer's authorized representative.

**§ 4.1.2** Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted

**§ 4.1.3** If the employment of the Architect is terminated, the Owner shall employ a new Architect whose status under the Contract Documents shall be that of the former Architect.

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## § 4.2 ADMINISTRATION OF THE CONTRACT

*(Paragraph deleted)*

§ 4.2.1. The Architect will provide administration of the Contract as described in the Contract Documents, and will be an Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the one or two year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

### § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's/Owner's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

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§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive, review for completeness and forward to the Owner, records, written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

§ 4.2.10 Delete

§ 4.2.11 The Architect will interpret and decide matters concerning performance under and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing with reasonable promptness

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance by the Contractor

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor. . Under no circumstances shall the Contractor subcontract any portion of the work under the Contract Documents to any person or entity in which the Contractor (including any officer and/or stockholder of the Contractor) has an ownership interest. Under no circumstances shall the Contractor assign or otherwise contract with another person or entity to assume the Contractor's obligations and duties as Contractor under these Contract Documents

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Within thirty (30) days of the award of the Contract, the Contractor shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection. Subcontractors, required to be named on the Bidding Documents, shall be used on the Work for which they are proposed, unless reasonable objection is indicated by the Owner, or the Architect.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

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§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected without approval of the Owner.

### § 5.3 SUBCONTRACTUAL RELATIONS

§5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2, or stoppage of the Work pursuant to Article 2.3, and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor and Contractor in writing;

*(Paragraphs deleted)*

### §5.5 PAYMENTS TO SUBCONTRACTORS

§5.5.1 The Contractor shall pay each subcontractor upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of each Subcontractor's work less the percentage retained for payments to the Contractor. The Contractor shall also require each Subcontractor to make similar payments to its Sub-subcontractors.

§5.5.2 If the Owner fails to approve a Requisition for Payment for a cause which the Owner determines is the fault of the Contractor and not the fault of a particular Subcontractor, or if the Contractor fails to make a payment which is properly due to a particular Subcontractor, the Owner may pay each Subcontractor directly less the amount to be retained under the Subcontract. Any amount so paid by the Owner shall be repaid to the Owner by the Contractor in the manner set forth in Subparagraph 2.4

§5.5.3 The Owner shall have no obligation to pay or see to the payment of any monies to any Subcontractor. Nothing contained in Article 5.5 shall be deemed to create any rights in any Subcontractor against the Owner.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

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§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

*(Paragraph deleted)*

## § 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor.

§ 6.2.4 The Contractor shall promptly remedy damage caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

*(Paragraph deleted)*

## § 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall not relieve the Contractor of obligations under the contract.

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§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

## § 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 an amount of the adjustment, if any, in the Contract Sum; and
- .3 the extent of an adjustment, if any, in the Contract Time.

§ 7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Section 7.3.3.

## § 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

*(Paragraphs deleted)*

§ 7.3.9 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

## § 7.4 CHANGE ORDERS

§ 7.4.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

- .1 change in the Work; and/ or
- .2 an amount of the adjustment, if any, in the Contract Sum; and/or
- .3 the extent of an adjustment, if any, in the Contract Time.

§ 7.4.2 Methods used in determining adjustments to the Contract Sum may include those listed in Section 7.3.3.

## § 7.5 MINOR CHANGES IN THE WORK

§ 7.5.1 The Architect with concurrence from the Owner will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the purposes of the building and the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

## ARTICLE 8 TIME

### § 8.1 DEFINITIONS

§ 8.1.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

### § 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents or a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work. .

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.2.4 Should the progress of the Work be delayed by any fault, neglect, act or omission of the Contractor or any person or firm employed by him or should it be necessary to complete the Work within the time permitted for the Contractor's work, the Contractor shall, at its own cost and expense, work such overtime as may be necessary to make up for all time lost and to avoid delay in completion of the Work. The Contractor shall compensate the Owner for and hold him harmless against any and all costs, expenses, reasonable attorney's fees, losses, liability, and damages that the Owner may sustain or incur by reason of such delay.

### § 8.3 DELAYS AND EXTENSIONS OF TIME

*(Paragraph deleted)*

§ 8.3.1. Requests for extension of completion time due to conditions over which the Contractor has no control, will be reviewed by the Owner after written application is made to the Architect for a time extension. Any request for any extension of time is to be made within 21 days of occurrence of conditions which, in the opinion of the Contractor

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warrant such an extension, with reasons clearly stated and detailed proof given for all delays beyond the Contractor's control. No time extension will be allowed except by written and specific approval of the Owner. Delays beyond the Contractor's control may include: an act or neglect of the Owner's own forces, Architect, any of the other Contractors, or an employee of any of them, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, or other causes beyond the Contractor's control, or by delay authorized by the Owner.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

*(Paragraph deleted)*

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

### § 9.2 SCHEDULE OF VALUES

§ 9.2.1 Before the first Requisition for Payment, the Contractor shall submit to the Architect a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Requisitions for Payment.

### § 9.3 REQUISITION FOR PAYMENT

§ 9.3.1 The Contractor shall prepare and submit three original copies to the Architect on the 25<sup>th</sup> day of each month itemized "Requisition for Payment" (IAC PSCP Form 306.4 Standard Contractor's Requisition for Payment and such other forms as may be designated by Owner) for operations completed in accordance with the Schedule of Values for the value of the work completed or anticipated to be completed through the last day of such month, including the value of material suitably stored at the Project Site or other approved locations as provided in Subparagraph 9.3.2, less the aggregate of any previous payments and retainages and less retainages required by the Contract Documents. No change in the Contract Sum shall be made by Contractor on any Requisition for Payment without an approved Change Order. Faxed Requisitions for payment will NOT be accepted.

At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents.

*(Paragraphs deleted)*

§ 9.3.2 As provided in Section 7.3.8, such Requisitions may include requests for payment on account of changes in the Work which have been properly authorized by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.3 Such Requisitions may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

9.3.4 Upon completion of fifty percent (50%) of the work and provided that the Contract work is on schedule and the Contractor's performance is deemed by the Owner to be satisfactory, the Owner may at his discretion decline to withhold further retainage on the remainder of the work to be billed. If Project schedules are not pursued diligently, or if the Contractor's work is at any time deemed by the Owner to be unsatisfactory, the withholding of the further retainage up to ten percent (10%) of the Contract value may be reinstated by the Owner at its discretion. If the Contractor intends to request a reduction of retainage as stated above, the Contractor must submit a request 30 days prior to invoicing the Owner for a reduction. A consent of surety to a reduction of retention along with a justification of the progress on the job in relation to the overall Project must be submitted. A complete labor and material schedule of values for all aspects of the work must also be submitted with the request for approval.

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§ 9.3.5 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site. . When the Requisition for Payment includes material or equipment stored off the Project site, the Contractor shall include with the requisition a certified statement including

1. Description of items,
2. Bill of Sale,
3. Location of storage facility and delivery receipt,
4. Items are currently covered by all contractual requirements, including liability and fire insurance,
5. Items, or any part thereof will not be installed in other construction projects other than work under this Contract.

§ 9.3.6 The Contractor warrants that title to all Work covered by a Requisition for Payment shall pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of a Requisition for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work. Contractor shall indemnify and hold Owner harmless from any liens, claims, security interests, or encumbrances claimed by Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and/or equipment relating to the Work and from all costs and expenses, including reasonable attorney's fees, incurred by Owner in connection therewith.

§ 9.3.7 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

#### § 9.3.8 Deleted

§ 9.3.9 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

### § 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Requisition for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The Architect shall endeavor to obtain approval by the Owner, and Contractor of the draft Requisition for Payment. If approval is obtained, the Architect shall notify the Owner, and Contractor, and shall issue a Project Certificate of Payment. The Contractor shall then submit five (5) copies of the agreed upon Requisition for Payment to the Architect which shall be signed by the Contractor, Owner, and Architect, and shall be notarized. If approval is not obtained of the draft Requisition for Payment, the Architect shall notify the Contractor of non-approval. The Architect shall issue a Project Certificate for Payment to the Owner with a copy to the Contractor for such amounts as the Architect, and Owner determine are properly due.. The Contractor shall then submit a Requisition for Payment pursuant to such Project Certificate for Payment, if any, in five (5) copies based on the Architect's determination. The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner,

based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has

- (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work,
- (2) reviewed construction means, methods, techniques, sequences or procedures,
- (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or
- (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

9.4.3 In any event, where the Owner, and Architect do not certify payment or withhold certification to any extent, the Contractor shall nonetheless continue to perform the Work fully.

## § 9.5 DECISIONS TO WITHHOLD CERTIFICATION

*(Paragraphs deleted)*

§9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or another contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 persistent failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

*(Paragraph deleted)*

## § 9.6 PROGRESS PAYMENTS

*(Paragraphs deleted)*

§ 9.6.1 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.2 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.



§ 9.6.3 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.4 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.1, 9.6.2 and 9.6.3.

§ 9.6.5 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.6 Under no circumstances shall the Contractor assign to any person or entity the Contractor's right to receive payment under the Contract Documents, unless the Contractor has received express, prior written consent of the Owner, which consent specifically identifies the identity of such assignee. Nothing contained in these Contract Documents shall require the Owner to approve such an assignment of payments by the Contractor to a third party.

§ 9.6.7 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

#### § 9.7 FAILURE OF PAYMENT

§ 9.7.1. If the Architect should fail to issue notice of approval or disapproval within fourteen (14) days of Owner's receipt of the Contractor's draft Requisition for Payment, or if, through no fault of the Contractor, the Architect does not issue a Project Certificate for Payment within seven (14) days after receipt of the Owner's approval or disapproval of the draft Requisition for Payment, the Contractor may file a claim against the Owner for payment as provided in Article 15.

#### § 9.8 SUBSTANTIAL COMPLETION

*(Paragraph deleted)*

§9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use; i.e., when the Owner is granted a "Use and Occupancy Permit" by Howard County and other Authorities having jurisdiction.

§ 9.8.2 When the Architect, and Owner agree that the project has reached "Substantial Completion" as set forth in Paragraph 9.8.1 and is on schedule, and it appears that there are no complications or problems in completing the job, the retainage may be reduced to five percent (5%) at the Owner's discretion.

9.8.3 Except as stated in Paragraph 9.8.2 after the payment due the Contractor at Substantial Completion has been made by the Owner, no other payment shall be made until the Project has been fully completed and the Contract fully performed.

*(Paragraph deleted)*

§ 9.8.4 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

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§ 9.8.5 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.6 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.7 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

#### § 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

#### § 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Requisition for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect

- (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied,
- (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner,
- (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents,
- (4) consent of surety, if any, to final payment with AIA Form; and
- (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner and release of liens on the "Contractor's Affidavit of Release of Liens and Payment of Debts and Claims" AIA Form;

(6) all records, Drawings and Specifications, Addenda, Change Orders, and other modifications maintained at the site under the Subparagraph 3.11 all warranties, instructions, and maintenance manuals required.

If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien or claim. If such lien or claim remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien or claim, including all costs and reasonable attorneys' fees incurred by Owner. Final payment to the Contractor shall not become due until all close-out documents have been properly submitted to and received by the Architect through the Construction Manager and certified to the Architect and delivered by the Architect to the Owner and all warranty work has been fully completed.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**§ 9.10.4**

*(Paragraphs deleted)*

**Deleted**

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Requisition for Payment.

The making of final payment shall, after the Date of Substantial Completion of the Project, constitute a waiver of all claims by the Owner except those arising from:

1. Unsettled claims,
2. Faulty or defective work appearing after Substantial Completion of work,
3. Failure of the work to comply with the requirements of the Contract Documents,
4. Terms of any special warranties required by the Contract Documents; and
5. Reasonable attorney's fees, court costs, and litigation expenses incurred by the Owner in prosecuting any such claims against the Contractor or in defending against any claims against the Owner arising out of the Contract and the work thereunder.

**ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

**§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS**

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

**§ 10.2 SAFETY OF PERSONS AND PROPERTY, INJURY OR DAMAGE TO PERSON OR PROPERTY**

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

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§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2., except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction site to be loaded so as to endanger its safety or the safety of persons or property. The Contractor shall protect adjoining properties, streets, walkways, sidewalks, and paths.

10.2.8 The Contract shall protect excavation and structures from damage by rain, water, ground water, or water from any other source. The Contract shall use tarpaulins, pumps, or other temporary protection to afford protection.

10.2.9 The Contractor shall provide constant protection to maintain work, materials, apparatus, and fixtures free from injury and damage by rain, snow, wind, storms, frost, or heat and shall cover work likely to be damaged at the end of each day's work.

10.2.10 The Contractor shall remove work damaged due to failure to provide specified protection and replace such removed work at no additional cost to the Owner.

10.2.11 Material Safety Data Sheets: Contractor shall provide Material and Data Safety Sheets on all items prior to commencement of Work. The Contractor shall designate a common location on the construction site where all independent contractors or employers shall have a chemical information list before the commencement of work.

#### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

*(Paragraph deleted)*

#### § 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 The Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time shall be extended appropriately.

§ 10.3.3 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents.

*(Paragraphs deleted)*

#### § 10.4 EMERGENCIES

*(Paragraph deleted)*

§ 10.4.1 In any case of an emergency, the Contractor shall immediately notify the Architect and the Owner by the most expeditious means available, followed by a Fax, or written notice, explaining the situation and actions taken.

§ 10.4.2 Additional compensation or extension of time will not be considered or permitted for emergencies arising from delay, damage, or loss as stipulated in 8.2.4 and 10.2.5 or other applicable provisions.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.2 GENERAL INSURANCE REQUIREMENTS

§11.2.1 The Contractor shall not commence Work until the Contractor has obtained at the Contractor's own expense all of the insurance as required under this Contract and until such insurance has been approved by the Owner. The Contractor shall not allow any Subcontractor to commence work on any subcontract until all insurance required of the Subcontractor has been so obtained and approved by the Contractor. Approval of insurance required of the Contractor will be granted only after submission to the Owner of original certificates of insurance signed by authorized representatives of the insurers or, at the Owners request, certificated copies of the required insurance policies. **Additionally, the Contractor must submit with the original certificates or certified policies, the enclosed Contractor's Insurance Checklist form (See Construction Insurance Check List attached to and incorporated into this Contract as Exhibit A.) completed by the Contractor and each of the Contractor's Insurance Agents or Contractor's Insurers (one form for each agent or insurer if multiple agents or insurers write the Contractor's coverages).**

§11.2.2 Insurance as required under this Contract shall be in force throughout the term of this Contract and for two years after final acceptance of the Project by Owner. Original certificated signed by authorized representatives of the insurers or, at the Owner's request, certificated copies of insurance policies, evidencing that the required insurance is in effect, shall be maintained with the Owner throughout the term of the Contract and for two years after final acceptance of the Project by Owner.

§11.2.3 The Contractor shall require all Subcontractors to maintain during the term of the Contract commercial general liability insurance, business auto liability insurance, and workers compensation and employers liability insurance and umbrella excess or excess liability insurance to the same extent required of Contractor in Sections 11.3.1.1 through 11.3.1.4 of this Contract unless any such requirement is expressly waived or amended by the Owner in writing. The Contractor shall furnish Subcontractor's certificates of insurance to the Owner immediately upon request.

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**§11.2.4** All insurance policies required under this Contract shall be endorsed to provide that the policy is not subject to cancellation, non-renewal, or material reduction in coverage until sixty (60) days prior written notice has been given to the Owner. Therefore, the phrases "endeavor to" and "...but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives" are to be eliminated from the cancellation provision of standard ACORD certificates of insurance.

**§11.2.5** Acceptance and/or approval of any insurance by the Owner shall not be construed as relieving or excusing the Contractor or the Contractor's Surety from any liability or obligation imposed upon either or both of them by the provisions of this Contract or the Contract documents.

**§11.2.6** If the contractor does not meet the insurance requirements of this Contract, the Contractor shall be in default under this Contract, and all default remedies shall be available to the Owner; moreover, no Work shall commence without such insurance, and, if Work has commenced, it shall cease immediately until the insurance requirements have been met or unless the Owner orders in writing that Work shall commence with specified alternate insurance as determined in the sole and absolute discretion of the Owner and set forth in the written order to commence or return to work signed by the Owner. The Contractor may forward a written request to the Owner for a waiver in writing of the insurance requirement(s) not met or for approval in writing of alternate insurance coverage, self-insurance, or group self-insurance arrangements. If the Owner denies the request, the Contractor shall comply with the insurance requirements as specified in this Contract or be held in default under this Contract. The Owner shall have the sole and absolute discretion to grant or deny such a request for a waiver, and the Owner's decision shall be final and binding upon all parties and shall not be subject to appeal or review.

**§11.2.7** All required insurance coverages must be underwritten by insurers licensed to do business in the State of Maryland and acceptable to the Owner. The insurers must also have a policyholders' rating of "A" or better, and a financial size of "Class VII" or better in the latest evaluation by A.M. Best company, unless Owner grants specific written approval for an exception. The Owner hereby grants specific approval for the acquisition of workers compensation and employers liability insurance from the Injured Workers Insurance Fund of Maryland.

**§11.2.8** Any deductibles or retentions in excess of \$10,000 shall be disclosed by the Contractor and shall be subject to Owner's written approval. Any deductible or retention amounts elected by the Contractor or imposed by the Contractor's insurer(s) shall be the sole responsibility of the Contractor.

**§11.2.9** Any and all return premiums and/or dividends for insurance or coverage directly charged to the Owner by the Contractor in connection with this Contract shall belong to and be payable to the Owner.

**§11.2.10** If the Owner is damaged by the failure or neglect of the Contractor to purchase and maintain insurance as described and required in this Contract, then the Contractor shall be in default under this Contract, shall bear all liability for all damages incurred, and shall be subject to the remedies under Article 14.

#### **§ 11.2.11 Owner's Liability Insurance**

**§11.2.11.1** Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance, or solely at the Owner's option, the Owner may self-insure the Owner's liability exposures.

#### **§11. 3 Contractor's Liability Insurance**

**§ 11.3.1** The Contractor shall purchase and maintain the following insurance coverages which will insure against claims which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone, directly or indirectly, employed by any of them, or by anyone for whose acts any of them may be liable. Insurance shall be written for not less than the limits specified below or required by law, whichever is greater.

**§11.3.2** Commercial general liability insurance or its equivalent for bodily injury, personal injury and property damage including loss of use, with minimum limits of:

- \$ 1,000,000 each occurrence;
- \$ 1,000,000 personal and advertising injury;
- \$ 2,000,000 general aggregate; and

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\$ 2,000,000 products/completed operations  
aggregate.

This insurance shall include coverage for all of the following:

- i. General aggregate limit applying on a per project basis;
- ii. Liability arising from premises and operations;
- iii. Liability arising from the actions of independent contractors;
- iv. Liability arising from products and completed operations with such coverage to be maintained for two years after final acceptance of the project by the Owner;
- v. Contractual liability including protection for the Contractor from bodily injury and property damage claims arising out of liability assumed under this Contract; and
- vi. Liability arising from the explosion, collapse, or underground (XCU) hazards.

*(Paragraph deleted)*

**§11.3.3** Business auto liability insurance or its equivalent with a minimum limit of \$1,000,000 per accident and including coverage for all of the following:

- i. Liability arising out of the ownership, maintenance, or use of any auto; and
- ii. Automobile contractual liability.

**§11.3.4** Workers compensation insurance or its equivalent with statutory benefits as required by any state or Federal law, including standard "other states" coverage; employers liability insurance or its equivalent with minimum limits of:

- \$ 100,000 each accident for bodily injury by accident
- \$ 100,000 each employee for bodily injury by disease; and
- \$ 500,000 policy limit for bodily injury by disease.

*(Paragraphs deleted)*

**§11.3.5** Contractor's pollution liability insurance or its equivalent for bodily injury, property damage, including loss of use, and clean-up costs on and off the Project site, with minimum limits of:

- \$ 1,000,000 each pollution incident; and
- \$ 1,000,000 annual aggregate.

The insurance shall include coverage for all of the following:

- i. Liability arising from activities of the Contractor or of others for whom the Contractor is legally obligated whether on or off the Project site; and
- ii. Contractual liability including protection for the Contractor from claims for bodily injury, property damage, and clean-up costs arising out of liability assumed under this Contract.

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**11.3.6** Umbrella excess liability or excess liability insurance or its equivalent with minimum limits of:

- \$ 5,000,000 occurrence;
- \$ 5,000,000 aggregate for other than products/completed operations and auto liability; and
- \$ 5,000,000 products/completed operations aggregate

and including all of the following coverages on the applicable schedule of underlying insurance:

- i. Commercial general liability;
- ii. Business auto liability; and
- iii. Employer's liability.

**§11.3.7** Owner and Owner's elected and appointed officials, officers, consultants, agents and employees shall be named as additional insureds on the Contractor's commercial general liability insurance and umbrella excess or excess liability insurance policies with respect to liability arising out of the Contractor's products, installation, and/or services provided under this Contract. Such coverage shall extend to cover the additional insured(s) for liability arising out of the following:

- i. On-going operations;
- ii. Owner's general supervision of installation and/or services as provided by the Contractor and/or its agents and subcontractors pursuant to this Contract; and
- iii. Products and completed operations.

The commercial general liability policy and the umbrella excess liability or excess liability policies must include additional insured language, which shall afford liability coverage for all of the exposures listed above in i., ii., and iii., as follows:

"This policy is amended to include as insureds Owner and Owner's elected and appointed officials, officers, consultants, agents, and employees, but only for liability arising out of "your product" and "your work" for Owner by or for you."

**Special Note: ISO forms CG 2009 and CG 2010 entitled "Additional Insured – Owners, Lessees or Contractors – Scheduled Person or Organization" (previously Forms A and B respectively) and CG 2033 entitled "Additional Insured – Owners, Lessees or Contractors – Automatic Status When Required in Construction Agreement with You" are NOT ACCEPTABLE. A manuscript endorsement with the above wording is required.**

*(Paragraph deleted)*

**§ 11.3.8** Insurance or self-insurance provided to the Owner and Owner's elected and appointed officials, officers, consultants, agents and employees under the Contractor's liability insurance or self-insurance required in this Contract, including, but not limited to, umbrella and excess liability or excess liability policies, shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of insurance or self-insurance. (Any cross suits or cross liability exclusion shall be deleted from Contractor's liability insurance policies required herein.)

**§11.3.9** Any insurance or self-insurance required to be provided by the Owner and Owner's elected and appointed officials, officers, consultants, agents, and employees shall be primary, and any other insurance, self-insurance, coverage or indemnity available to the Owner and Owner's elected and appointed officials, officers, consultants, agents, and employees shall be excess of and non-contributory with insurance or self-insurance provided to the Owner and Owner's elected and appointed officials, officers, consultants, agents, and employees.

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*(Paragraph deleted)*

**§11.3.10** If any liability insurance purchased by the Contractor has been issued on a "claims made" basis, the Contractor shall comply with the following additional conditions:

- i. The Contractor shall agree to provide certificates of insurance evidencing the above coverages for a period of two years after final payment for the Contract. Such certificates shall evidence a retroactive date no later than the beginning of the Work under this Contract; or
- ii. The Contractor shall purchase an extended (minimum two years) reporting period endorsement for each such "claims made" policy in force as of the date of final acceptance of the project by the Owner and evidence the purchase of this extended reporting period endorsement by means of a certificate of insurance or a copy of the endorsement itself. Such certificate or copy of the endorsement shall evidence a retroactive date no later than the beginning of the Work under this Contract.

*(Paragraph deleted)*

**§ 11.4 Builders Risk Insurance (Owner to Purchase)**

**§ 11.4.1** The Owner shall purchase and maintain builders risk insurance on a replacement cost basis with a limit at least equal to the initial Contract Sum. This insurance shall be maintained until final acceptance of the Project by the Owner or until no person or entity other than the Owner has an insurable interest in the covered property, whichever is earlier. This builders risk insurance shall include the interests of the Owner, Subcontractors and Sub-subcontractors in the Project.

*(Paragraphs deleted)*

**§11.4.2** Insurance shall be on an "all-risk" or equivalent policy form and shall insure against the perils of fire, extended coverage, theft, vandalism, malicious mischief, collapse and windstorm. Coverage is to apply for debris removal, including demolition occasioned by a covered loss. This insurance shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such covered loss. Coverage for other perils such as flood and earthquake or for loss caused by the enforcement of any applicable ordinance or law shall not be required unless otherwise provided in the Contract.

**§ 11.4.3** This builders risk insurance shall cover all of the following types of property:

- i. All structures to be constructed, under construction, and/or already constructed;
- ii. All materials, equipment, machinery and supplies which are to be incorporated into the Project;
- iii. Temporary structures of any nature whatsoever; and
- iv. Underground property, including but not limited to, foundations, pump stations, pumps, pipes, drains, tanks and connections.

*(Paragraph deleted)*

**§11.4.4** The Contractor shall be responsible for payment of any deductibles applicable under this builders risk insurance, boiler and machinery insurance, or other property insurance applicable to the Project.

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§ 11.4.5 Unless otherwise provided in the Contract Documents, this builders risk insurance shall cover materials to be incorporated into the Project, which are either on or off the site, and also such materials in transit.

*(Paragraph deleted)*

§ 11.4.6 This builders risk insurance shall insure (or shall be amended to insure) against loss or damage caused by the boiler and machinery perils with limits and scope of coverage that are deemed by the Owner to be satisfactory. This insurance shall also include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project.

*(Paragraph deleted)*

§ 11.4.7 The Owner and Contractor waive all rights against each other and against the Construction Manager, Owner's other Contractors and own forces described in Article 6, if any, and the subcontractors, sub-subcontractors, (elected and appointed officials, officers, directors, trustees, agents, employees and consultants) of any of them for property damage to or loss of use of the Work to the extent that such property damage or loss of use is covered by this builders risk insurance, boiler and machinery insurance, or other property insurance applicable to the Work. The policies shall provide such waivers of subrogation by endorsement or otherwise.

*(Paragraph deleted)*

§ 11.4.8 Any loss covered under this builders risk insurance, boiler and machinery insurance, or other property insurance applicable to the Work shall be payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to any mortgagee clause. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

*(Paragraph deleted)*

§ 11.4.9 Owner, as fiduciary, shall have the power to adjust and settle a loss with insurers.

*(Paragraphs deleted)*

§ 11.4.10 Partial occupancy or use in accordance with the provisions of the Contract that pertain to partial occupancy or use shall not commence until the builders risk insurer has granted permission by endorsement or otherwise for the Owner to partially occupy or use any completed or partially completed portion of the Work at any stage of construction. The Owner and Contractor shall take reasonable steps to obtain such permission.

*(Paragraphs deleted)*

§ 11.4.11 The insurance required by this Paragraph 11.4 is not intended to cover machinery, tools, or equipment owned or rented by the Contractor or its Subcontractors, which are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor and its Subcontractors shall, at their own expense, purchase and maintain property insurance coverage for owned, leased, or rented machinery, tools or equipment. The Contractor and its Subcontractors hereby waive all rights against the Owner and its elected and appointed

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officials, officers, agents, employees, and consultants for property damage to or loss of use of such machinery, tools, or equipment. The policies shall provide such waivers of subrogation by endorsement or otherwise.

### **§11.5 Miscellaneous Insurance**

**§11.5.1** The Contractor shall comply with the provisions of Federal law governing Social Security and with State and/or Federal laws regarding Unemployment Insurance, and all other State and/or Federal laws regarding insurance, as may be now and hereafter in force. The Contractor shall bear exclusive and sole liability for and will hold the Owner harmless against any and all demands for any required payments, taxes, or withholdings (including any interest or penalties assessed thereon) for the Contractor's (or any of its Subcontractor's) failure or refusal to comply with any such laws. Failure to comply shall be deemed a default subject to the remedies of Article 14.2.

### **§ 11.6 PERFORMANCE BOND AND PAYMENT BOND**

**§ 11.6.1** The Contractor shall furnish a Performance Bond and Labor and Materials Payment Bond covering the faithful performance of the Contract and the payment of all obligations arising thereunder and complying with the requirements of Maryland Law. Both bonds shall be in the amount of one hundred percent (100%) of the Contract amount and shall name the Howard County Board of Education as Obligee.

#### **§ 11.6.2**

Bonds shall be written by a bonding company that must be licensed with the Maryland Insurance Administration to do business in the State of Maryland and otherwise acceptable to the Howard County Public School System. The Contractor shall use Bond Forms provided by the Owner AIA 312 Performance Bond and AIA 312 Labor and Material Payment Bond, in order to satisfy the Bond requirements referenced in this Article.

**§ 11.6.3** Firms issuing said bonds must be licensed to write bonds in the State of Maryland. The Contractor shall pay the premiums for required bonds. Obtainage of the required bonds by Contractor shall be a condition precedent to effectuation of the Contract between Owner and Contractor. If additional work is authorized, the amounts of the bonds shall be increased to cover the value of the increased Contract sum. All bonds shall conform to the requirements of the Maryland Little Miller Act. All bonds shall be subject to Owner's approval.

**§ 11.3.4** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

*(Paragraphs deleted)*

**§ 11.3.5** Owner reserves the right to request from Contractor financial statements for the Contractor for up to 3 prior fiscal years.

**§ 11.3.6** To protect the public interest the Owner will request a D & B report on the Contractor at any time during the term of the project. Should the D & B rating fall below the awarded rating, Contractor shall advise Owner of their corrective measures.

## **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

### **§ 12.1 UNCOVERING OF WORK**

**§ 12.1.1** If any portion of the Work is covered contrary to the request of the Architect, or the requirements specifically expressed in the Contract Documents, it must, if required in writing by either, the Owner or any other government agency, be uncovered for their observation and shall be replaced at the Contractor's expense without change in the Contract Time If a portion of the Work is covered contrary to the Architect's request or to requirements specifically

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expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense.

## § 12.2 CORRECTION OF WORK

§12.2.1 Defective work shall include but not be limited to Work which may be caused by deterioration or failure to perform due to premature wear (not occasioned by abuse) or inherent defects in materials, workmanship of manufacturer or fabrication or improper execution of work

§12.2.2 Cost of correcting such rejected work also includes all contingent damages arising there from including damages to other work (whether installed by the Contractor or another) and to other property of the Owner.

§12.2.3 Such warranties as provided herein do not deprive the Owner of the Owner's right to prosecute any claim for breach of contract and/or any other claim for appropriate relief and damages.

§12.2.4 Any defective or nonconforming work during this period causing a hazard to life, safety, property, or use causing the Owner a financial loss shall be corrected immediately without regard to normal working hours. The Owner will immediately endeavor to provide telephone notice to the Contractor on the next normal working day.

§ 12.2.5 The Owner shall direct, if endeavors to contact the Contractor fail, certain telephone notification to Subcontractors in order to expedite emergency repairs. The Contractor shall not be relieved of responsibility by the procedure, and the Contractor shall supervise and direct correction of defects as required by the Contract Documents.

§12.2.6 The manufacturer of a product may be specifically mentioned as a party to a warranty. Then in such cases, it shall be the Contractor's obligation to produce the required warranty of the manufacturer and submit it to the Architect for examination and approval. Inclusion of a manufacturer as a party to a warranty does not relieve the Contractor from the requirements of the Contract Documents.

§12.2.7 Warranties on operating systems, equipment, or components placed in operation prior to Substantial Completion or acceptance shall begin on the date of Substantial Completion.

## § 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

## § 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition.

During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

*(Paragraphs deleted)*

§ 12.2.2.4 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.2.5 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.2.6 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

#### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

### ARTICLE 13 MISCELLANEOUS PROVISIONS

#### § 13.1 GOVERNING LAW

The Contract shall be governed by the laws of the State of Maryland and shall be construed in accordance with such laws.

#### § 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

#### § 13.3 WRITTEN NOTICE

§13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

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§13.3.2 All Contractor proposals, approvals, instruction, requests, claims, demands, and other notices shall be made in writing on Contractor's stationery; meeting minutes and FAX transmissions will not be considered written notice from Contractor.

## § 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

*(Paragraph deleted)*

§13.4.2 In any claim and/or litigation filed by the Owner against the Contractor to enforce any provision of this Contract, the Owner shall be entitled to all reasonable attorney's fees, expenses, damages, litigation expenses, and court costs incurred in and/or resulting from any such claim and/or litigation. In any claim and/or litigation brought by the Contractor against the Owner and/or its agents, the Contractor shall bear the Owner's court costs, expenses, and reasonable attorney's fees incurred, unless the Court specifically determines as a matter of fact and law that the Owner, knowingly, willfully, and intentionally breached a provision of this Contract giving rise to Contractor's claim and resulting damages

§ 13.4.3 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

## § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

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**§ 13.6 INTEREST**

**§ 13.6.1** No interest shall be paid by the Owner to the Contractor.

**§ 13.7 TIME LIMITS ON CLAIMS, COMMENCEMENT OF STATUTORY LIMITATION PERIOD**

**§ 13.7.1** Contractor recognized and agrees that Owner is a governmental agency and that the statute of limitations is not applicable to claims and/or litigation filed by the Owner. Limitations as to time for filing of any claims, disputes, and/or litigation by the Contractor, or any person or entity claiming by, through, or on behalf of the Contractor, shall be as specified in Article 15.

**13.8 BUY AMERICAN STEEL**

**§13.8.1** Contractor shall comply with the Buy American Steel Act Sections 17-301 to 17-306 of the Finance and Procurement Article of the Annotated Code of Maryland.

**§13.8.2** Contractor shall be required to use or supply the domestic steel products unless the cost is unreasonable or inconsistent with the public interest.

**ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

**§ 14.1 TERMINATION BY THE CONTRACTOR**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;

*(Paragraphs deleted)*

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed.

*(Paragraph deleted)*

**§ 14.2 TERMINATION BY THE OWNER FOR CAUSE**

**§ 14.2.1** The Owner may terminate the Contractor's employment under this Contract if the Contractor:

- .1 persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents such as, but not limited to:
  - (1) Failure to maintain progress in accordance with project schedule;
  - (2) Prevents other Contractors from meeting their scheduled progress;
  - (3) Performs work in a negligent or defective manner or in a manner contrary to the Contractor Documents;
  - (4) Failure to provide and maintain the required insurance coverage and the required bonds;
  - (5) Filing of bankruptcy proceedings by or against the Contractor and/or the filing of an assignment for the benefit of Contractor's creditors; and/or
  - (6) Breach of any provision of the Contract Documents.

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§ 14.2.2 When any of the above reasons exist, the Owner, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 accept assignment of subcontracts pursuant to Section 5.4; and
- .3 finish the Work by whatever reasonable method the Owner may deem expedient.

.4 When the Owner terminated the Contractor for one of the reasons stated in Subparagraph 14.2.1 and invokes the Performance Bond to complete the Work, the surety shall not without the written consent of the Owner, retain the Contractor for the Work, and the Contractor shall not without written consent of the Owner perform any of the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. In the event the Owner elects to terminate the Contractor's employment under this Contract, the Contractor shall only be entitled to be paid for work under the Contract actually completed by the Contractor up to the date of Contractor's termination less deductions for

(1) the cost of correcting any deficient or defective work, including compensation for the Construction Manager and Architect and their respective consultants' additional services and expenses made necessary by the Contractor's defective work, default, neglect, or failure to perform under this Contract;

(2) damages incurred by the Owner as a result of the Contractor's breach, including but not limited to the costs to finish the work and damages for delay, if any, in completing the work under the Contract;

(3) actual reasonable attorney's fees incurred by the Owner in obtaining legal advice, counsel, and/or representation relating to the issues of Contractor's breach of contract, defective work, default, neglect, or failure to perform and Owner's legal options relating thereto as well as any other reasonable attorney's fees due to Owner under other provisions of this Contract; and

(4) such other amounts due and owing to Owner under the terms and conditions of the Contract documents. In the event the Contractor is terminated pursuant to Article 14.2, the Contractor shall not be entitled to any remaining funds under the Contract, except as specifically provided above and subject to the availability of funds after all work is completed.

All remaining unpaid funds in the Contract as of the date of Contractor's termination shall be the sole and exclusive property of the Owner, and the Contractor shall be paid by the Owner at the conclusion of all work under the Contract as provided above, but only to the extent that there are funds remaining after all payments have been made first to complete the work under the Contract and to compensate the Owner as provided above in the (4) enumerated deductions in this Article 14.2.3. Any funds still remaining after payment for all work and after payment of the Contractor as provided above shall be the sole and exclusive property of the Owner.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and payment of the four (4) enumerated deductions in Article 14.2.3 other damages incurred by the Owner and not expressly waived, such excess shall be the sole and exclusive property of the Owner. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor if any, for work completed by the Contractor less the deductibles provided in Paragraph 14.2.3) shall be determined by the Owner, and this obligation for payment shall survive termination of the Contract.

#### § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE



§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

*(Paragraphs deleted)*

#### § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

### ARTICLE 15 CLAIMS AND DISPUTES

#### § 15.1 CLAIMS

§ 15.1.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor (and any person or entity claiming by, through, or on behalf of Contractor) arising out of or relating to the Contract. Claims must be initiated by written notice, on Contractor's stationary, Meeting minutes and Fax transmissions from the Contractor will not be considered written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 Decision of Architect. Any claim, dispute, or other matter in question between the Contractor and the Owner shall be made in writing to the Architect except those relating to artistic effect as provided in Subparagraph 4.2.13 and those which have been waived by the making or acceptance of final payment as provided in Article 9. The Architect shall provide each party with ample opportunity to present its evidence with respect to the claim made, and the Architect shall render his decision on the claim not less than ten (10) days after the close of evidence before the Architect. The decision of the Architect may be appealed by litigation in the Circuit Court of Howard County as provided below. However, no litigation of any such claim, dispute or other matter may be made until the earlier of (1) the date on which the Architect has rendered a written decision, or (2) the eleventh day after the parties have presented their evidence to the Architect or have been given a reasonable opportunity to do so, if the Architect has not rendered a written decision by that date. With respect to all claims and/or disputes, the final written decision of the Architect shall be final and binding on the parties and on those claiming by, through, and/or on behalf of any such party, person, or entity who had the right to do so, and failed to do so, unless the final written decision of the Architect as to any such claim and/or dispute is appealed to the Circuit Court for Howard County by a party within thirty (30) days after having received the Architect's final written decision. In any such appeal of the Architect's final written decision, it shall be presumed that the Architect's decision is correct, and the Architect's decision shall be treated and regarded in the same manner in which an arbitrator's award would be treated and regarded by a Maryland court under Maryland's Uniform Arbitration Act, subject, however, to the procedural requirements specified in the Contract documents. The failure to appeal the Architect's final written decision within the aforementioned thirty (30) day period shall result in the said decision becoming final and binding on all parties as provided above. The Circuit Court for Howard County, Maryland, shall be the sole and exclusive jurisdiction for appealing any final written decision of the Architect. If the Architect renders a decision after litigation proceedings have been filed, such decision may be entered as evidence but will not supersede any litigation proceedings unless the decision is acceptable to all parties concerned.

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**§ 15.1.3 Time Limits on Claims.** Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Architect and the other party.

**§ 15.1.4 Continuing Contract Performance.** Pending final resolution of a Claim except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. Except the Owner may withhold payment to the extent reasonably necessary to secure or compensate for a claim. This Article 15.1.4 shall not apply if the Owner has terminated the Contractor's employment pursuant to

**§ 15.1.5 Claims for Concealed or Unknown Conditions.** If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the Architect has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to further proceedings pursuant to Section 4.4.

*(Paragraphs deleted)*

**§ 15.1.6**

*(Paragraphs deleted)*

**Claims for Additional Cost.** If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4

**§ 15.1.7** If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 15.1

**§ 15.1.8 Claims for Additional Time**

**§ 15.1.8.1** If the Contractor wishes to make Claim for an increase in the Contract Time, written notice shall be made in writing to the Architect not more than twenty-one (21) days after the commencement of the delay, otherwise it shall be waived.

**§ 15.1.8.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction. . In establishing the time of construction completion, the weather conditions as recorded by the National Oceanic Atmospheric Administration (NOAA) at the National Climatic Data Center, Ashville, North Carolina over the past five (5) years will be taken into consideration. No extension of time, due to weather conditions, will be considered unless accompanied by NOAA documentary evidence showing by comparison that such weather is abnormal to the statistical mean of the past five (5) years and that such abnormality caused the delay.

**§ 15.1.8.3 Injury or Damage to Person or Property.** If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible,

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written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

## § 15.2 RESOLUTION OF CLAIMS AND DISPUTES

### § 15.2.1 Litigation

§ 15.2.1 Any Claim arising out of or related to the Contract. Any controversy or Claim arising out of or related to the Contract, or the breach thereof, shall be resolved finally by litigation in the Circuit Court of Howard County, Maryland, provided, however, that the provisions of this Article 15.2.1 authorizing litigation in court shall not be exercised by any party until the provisions of Article 15.1.2 shall have been complied with and exhausted. No party shall be entitled to litigate any dispute and/or claim unless and until that party has fully complied with the provisions of Article 15.1.1. The failure of any party to adhere to and comply with the provisions of Article 15.1.1 shall serve as a bar to that party's litigating a claim and/or dispute in court.

§ 15.2.2 Claims and Timely Assertion of Claims. Since the Owner is a public body, politic and corporate, its claims shall not be barred by any contractual period of limitations or by any statute of limitations. Claims by the Contractor shall be filed as provided in Article 15 (Claims and Disputes), and the time limits prescribed in Article 15 shall serve as a limitation upon filing of any and all claims and/or litigation by the Contractor and/or any person or entity claiming by, through, or on behalf of the Contractor.

### 15.3 Policies of Employment.

*(Paragraphs deleted)*

#### §15.3.1 The Contractor shall maintain policies on employment as follows:

1. The Contractor and all Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin or age. The Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, sex, national origin, or age. Such action shall include but not be limited to the following:

Employment, upgrading demotion or transfer, recruitment or recruitment advertising layoff or termination rates or pay or other forms of compensation and selection for training including apprenticeship.

The Contractor shall post in conspicuous places available to employees and applicants for employment notices setting forth the policies of non-discrimination.

§15.3.2 The Contractor and all Subcontractors shall in all solicitations or advertisements for employees placed by them or on their behalf state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national origin, or age.

§15.3.3 Minority Business Enterprise (MBE) Requirements are a part of the Conditions of the Contract, including Exhibits A, B, and C included with Form of Proposal.

## ARTICLE 16 CONTRACTOR PERFORMANCE EVALUATION SCORECARD

Upon completion of a project or at any time during the project, the awarded contractor shall receive a performance evaluation scorecard rating the contractor's performance on the project. The evaluation scorecard will become part of the contractor's permanent file. A sample Contractor Performance/Evaluation Scorecard is included with the bid documents.

The evaluation scorecard shall include the following performance indicators; Quality of Work, Responsiveness, Professionalism, Resources, Schedule Management, Quality Control, Deficiency Resolution, Submittal Management, Training, Appearance, Security, Safety, Utility Conservation, Disruptions, Quality of Materials, Emergency

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Response, Hazardous Materials, Innovation, Teamwork, Cost Management, Billing, Compliance.

A contractor shall have up to 3 weeks after notification to appeal, challenge or otherwise dispute the scorecard results. After the 3-week period, the scorecard shall be considered final and accepted by the contractor.

A contractor receiving a 70% or less overall evaluation scorecard rating for a project may be disqualified for bidding on any future projects with the HCPSS for a period of three (3) years and/or for the remaining contract term including renewal options.

## EXHIBIT A

### 1. Commercial General Liability

Insurer (precise name as per policy, not group name)  
Best's Rating and Financial Size

Each Occurrence Limit  
Personal and Advertising Injury Limit  
General Aggregate Limit  
Products/Completed Operations Aggregate Limit

Occurrence Basis	yes	no
General Aggregate Limit applies Per Project	yes	no
Premises/Operations	yes	no
Actions of Independent Contractors	yes	no
Products/Completed Operations	yes	no
Contractual Liability	yes	no
Explosion, Collapse or Underground (XCU) Hazards	yes	no

Owner included as an additional insured		yes	no
Individuals related to Owner included as additional insureds	yes		no
Manuscript additional insured wording per insurance requirements	yes		no
If no, additional insured coverage extends to cover liability arising out of:			
Owner's general supervision	yes		no
Products and completed operations	yes		no
Specimen of additional insured wording attached if other than manuscript wording in the insurance requirements	yes		no
No cross suits or cross liability exclusion	yes		no
Coverage for additional insureds is primary to Owner's coverage	yes		no
60 days notice of cancellation, nonrenewal, etc.	yes		no
Amount of Retention or Deductible			
Specify if Retention or Deductible applies per occurrence or claim			

### 2. Business Auto Liability

Insurer (precise name as per policy, not group name)		
Best's Rating and Financial Size		
Each Accident Limit		
Any Auto (or Hired and Non-owned Autos, if no owned autos)	yes	no

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Contractual Liability	yes	no
60 days notice of cancellation, nonrenewal, etc.	yes	no
Amount of Retention or Deductible		
Specify if Retention or Deductible applies per accident or claim		

**3. Workers Compensation and Employers Liability**

Insurer (precise name as per policy, not group name)		
Best's Rating and Financial Size		
Statutory benefits as required by state or Federal law	yes	no
"Other States" coverage	yes	no
Employers liability	yes	no
Each accident limit		
Each employee limit-disease		
Policy limit-disease		
60 days notice of cancellation, etc.	yes	no
Amount of Retention or Deductible		
Specify if Retention or Deductible applies per accident or claim		

**4. Contractors Pollution Liability**

Insurer (precise name as per policy, not group name)		
Best's Rating and Financial Size		
Each Pollution Incident Limit		
Annual Aggregate Limit		
Other Limit(s)		
Coverage Form:	Claims Made	Occurrence
Covers Operations of Both Contractor and Subcontractors	yes	no
Contractual Liability	yes	no
60 days notice of cancellation, nonrenewal, etc.	yes	no
Amount of Retention or Deductible		
Specify if Retention or Deductible applies per occurrence or claim		

**5. Umbrella Excess or Excess Liability**

Insurer (precise name as per policy, not group name)		
Best's Rating and Financial Size		
Coverage Form:	Umbrella and Excess	Straight Excess
Each Occurrence Limit		
General Aggregate Limit (for other than products/completed operations and auto liability)		
Products/Completed Operations Aggregate Limit		
Underlying Schedule of Insurance includes:		
Commercial General Liability	yes	no
Business Auto Liability	yes	no
Employers Liability	yes	no

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Owner included as an additional insured	yes	no
Individuals related to Owner included as additional insureds	yes	no
Manuscript additional insured wording per insurance requirements	yes	no
If no, additional insured coverage extends to cover liability arising out of:		
Owner's general supervision	yes	no
Products and completed operations	yes	no
Specimen of additional insured wording attached if other than manuscript wording in the insurance requirements	yes	no
No cross suits or cross liability exclusion	yes	no
Coverage for additional insureds is primary to Owner's coverage	yes	no
60 days notice of cancellation, nonrenewal, etc.	yes	no
Amount of Retention		
Retention applies per occurrence	yes	no

**INSURANCE AGENT'S OR INSURER'S STATEMENT**

I have reviewed the Contract's insurance requirements with the contractor named below. I hereby verify the above responses.

Name of Agent or Insurer:

Agency or Insurer Name:

Authorized Signature and Date:

Phone #:

Fax #:

E-mail:

**CONTRACTOR'S STATEMENT**

If awarded the contract, I will comply with the Contract's insurance requirements. I further agree to maintain property insurance on the machinery, tools and equipment which are owned, rented or leased by my firm and which are utilized in the performance of the services rendered under this Contract.

Contractor's Name:

Authorized Signature and Date:

Phone #:

Fax #:

E-mail:

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EXHIBIT A  
CHANGE ORDER REQUEST FORMAT

PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

GENERAL CONTRACTOR: \_\_\_\_\_

SUBCONTRACTOR: \_\_\_\_\_

SUB-SUBCONTRACTOR: \_\_\_\_\_

C.O.R. ITEM OR WORK: \_\_\_\_\_

- I. DIRECT PAYROLL LESS FRINGES, INSURANCE, TAXES\*: \_\_\_\_\_
- II. FRINGES, TAX, INSURANCE BURDEN \_\_\_% OF PAYROLL: \_\_\_\_\_
- III. TOTAL MATERIAL COSTS\*\*:
- IV. MATERIAL SALES TAX:
- V. EQUIPMENT RENTALS (ATTACH COPY OF INVOICE):
- VI. CONTRACTOR-OWNED EQUIPMENT\*\*:
- VII. PROFIT AND OVERHEARD 20% OF LINES I & III:
- VIII. 8% OF LINE V (ONLY WITH INVOICE COPY):
- IX. TOTAL ALL LINES:
- X. SUBCONTRACTORS COSTS (ATTACH BREAKDOWN):
- XI. 8% PROFIT & OVERHEAD ON SUBCONTRACTORS:
- XII. TOTAL LINES IX, X, & XI:
- XIII. BOND \_\_\_% OF LINE XII:
- XIV. TOTAL COST OF WORK:

\*Provide Itemization of Labor Hours and Worker Classification

\*\*Provide Itemization.

Change Order Request Format is Required for each Portion of Change Order Request Submission.

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## EXHIBIT A

### DESCRIPTION

All change orders shall be submitted in the change order request format (see Exhibit A) as set forth below:

1. Attach an itemization of labor hours. A certified payroll affidavit may be required to substantiate labor rates. The cost of foreman and superintendents may be added only when the change order makes necessary the hiring of additional supervisory personnel or makes their employment for time in addition to that required by the basic contract.
2. Labor burden percentage costs shall include all fringes, taxes, insurance, liabilities, workmen's compensation, unemployment, and any additional cost associated as labor burdens. Labor burden percentage rates are subject to approval of the Owner and is not subject to profit and overhead.
3. Attach an itemization of all materials used listing unit prices and extended prices.
4. Attach an itemization of equipment used and rental rates. If equipment is a rental, attach copy of the rental invoice. Rental equipment and contractor-owned equipment costs shall include all costs associated with the equipment, i.e. transportation, set-up, gas, and oil. Rental rates shall not exceed rates established by local rental companies and "MEANS DATA" rates.
5. Profit and overhead shall be considered full reimbursement for any additional expenses caused by the change order work. The Contractor shall agree to 20% profit and overhead markup on work by his own forces and 8% profit and overhead mark up on Subcontractors work. Allowances for overhead shall include but not limited to the costs for use of, small tools and consumables; trucks and trucking costs; maintenance and/or operations of Contractor's regular established office, branch office, and other facilities; resident and/or non-actively engaged supervision; time keepers; clerk; stenographer; watchmen; cost of correspondence; increased item of warranty under the change.
6. Profit and overhead at 8% may be added to equipment which is rented.
7. Only the actual added costs of the bond may be added to the change order amount. No further markup shall be allowed.
8. Change order requests shall not be considered unless they are submitted in proper format with all required and requested supporting documentation. All portions of the change shall use the change order request format.
9. For all work to be performed by a Subcontractor/Subcontractors, the Contractor shall furnish the Subcontractors itemized proposal which shall contain original signatures by an authorized representative of the Subcontracting firm. If requested by the Owner or Architect, proposals from suppliers or other supporting data to substantiate the Contractor's or Subcontractor's cost shall be furnished.
10. On changes resulting in a credit to the Owner, the credit shall be the net cost without profit overhead and profit.
11. Change order costs shall not exceed unit pricing as provided if applicable by Contract Documents.

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**SECTION 000720**  
**HCPSS SUPPLEMENTAL GENERAL TERMS AND CONDITIONS**

**2.1 CONTRACT AWARD**

It is the intent of The Howard County Public School System (hereinafter "HCPSS" or the "Board") to award to the lowest responsive and responsible Bidder(s) meeting specifications. HCPSS retains the right to award in aggregate, item-by-item, group-by-group, in full or in part, make multiple awards, partial awards, to increase or decrease quantities where quantities are shown and may reject any bid which indicates any omission, contains alteration of form or additions, or imposes conditions, or offers alternate items and may make any award which is deemed in the best interest of the HCPSS or to make no award at all at its sole discretion.

The HCPSS shall be the sole authority as to whether Bidder's offer meets specifications or are an approved equal and further reserves the right to reject any or all proposals or waive any informality which may appear to be in its best interest. HCPSS further reserves the right to consider information other than price when evaluating bids. A contract may be awarded to the provider(s) whose proposal best meets HCPSS requirements and needs at the time of award and whose fee structure is in the best interest of HCPSS.

HCPSS reserves the right to make an award with or without negotiations or to request best and final offers or to make award with or without further review.

In the event of tie bids where all factors are equal, award shall be made to one of the tie bidders in the following order of preference: Howard County based Bidder, the out of county Bidder but incorporated in Maryland, and then the out of state based Bidder. In the event a tie bid still exists, the Director of Procurement and Materials Management or their designee, shall conduct a coin toss for selection of the potential Award Bidder(s) or seek a geographical, proportional or divided award of contract, whichever is in the best interest of HCPSS.

**2.2 CONTRACT DOCUMENTS**

Contract Documents consist of all solicitation documents, the specifications and scope of work and any applicable addenda, and any additional documentation issued. All of these materials and documents associated with this solicitation will be included in the Contract(s) which the Board of Education awards as a result of this solicitation and will become the contract. The offeror, by submitting its proposal, agrees that if awarded the contract that it will be bound under the contract to all the Terms and Conditions of the Contract Documents for any future goods and/or services awarded under this contract.

If Offeror's proposal is accepted and awarded, it will become incorporated and an integral part of the contract. However, Bidder's terms and conditions, unless expressly accepted by HCPSS, shall be excluded from the contract documents.

**2.3 ORDER OF PRECEDENCE**

In the event of an inconsistency among provisions of this Request for Proposal, the inconsistency shall be resolved by the following order of precedence:

- A. Specifications - Drawings
- B. HCPSS General Terms and Conditions (supplemental)
- C. AIA Documents (General Conditions, etc.)
- D. General Information
- E. Appendices, Exhibits, & Attachments

**2.4 WAIVER OF RIGHT TO BID ON OTHER CONTRACTS**

The Consultant agrees that it and its parent, its affiliates and subsidiaries, if any, waive the right to bid on any procurement contracts, of any tier, resulting from the services to be provided under this

agreement.

## **2.5 INITIATION OF WORK**

The Offeror shall not commence performance of the services until it receives a formal written notice to proceed from HCPSS.

## **2.6 RESPONSIBILITY FOR CLAIMS AND LIABILITY**

The Offeror shall be responsible for any personnel injury, loss of life, and damage to or loss of property arising from or related to Offeror's activities or those of its subcontractors, agents, or employees in connection with the goods and/or services required under this agreement. The Offeror shall indemnify and save harmless HCPSS, its elected officials, officers, agents and employees from and against all claims, suits, demands, judgments, expenses, actions, damages and costs of every name and description, including but not limited to attorney's fees arising out of or resulting from its negligent or wrongful performance or failure of performance of the services of the Offeror under this agreement or the activities conducted or required to be conducted by the Offeror under this agreement, including its subcontractors, agents, or employees.

## **2.7 BILLING AND PAYMENT**

The awarded bidder shall submit invoices to the Howard County Public School System, (Name of Department), 10910 Clarksville Pike, Ellicott City, MD 21042, Attn: (Name of Contact), at the completion of each job. Invoices must contain the following information:

- a) Purchase Order Number
- b) Name of school
- c) Description of work along with quantities
- d) Start date and completion date
- e) Itemized breakdown of project costs to include labor and materials.
- f) Total due

## **2.8 INSURANCE**

The Offeror has in force, or shall obtain, and will maintain insurance for the full term of the contract (including any executed renewals) in not less than the amounts specified and accordance with the requirements contained in Section 000601 Insurance Requirements.

The awarded bidder shall reimburse, indemnify, and hold harmless the Board for all losses to the Board, including attorney's fees and cost resulting from negligence of the contractor in the performance of this contract, and for all losses to the Board resulting from non-performance thereof, except those losses otherwise specifically excluded by the Board.

## **2.9 SUBCONTRACTING OR ASSIGNMENT**

It is mutually understood and agreed that awarded bidder(s) shall not assign, transfer, convey, sublet, or otherwise dispose of their contract or their rights, title or interest, therein, or their power to execute such contract in whole or in part to any other person, firm, or corporation, without the previous written consent of the HCPSS' Purchasing Director, but in no case shall such consent relieve the contractor from their obligation, or change the terms of the contract or purchase order.

Assignment or subcontracting without the written approval of HCPSS will be cause for termination.

In the event that some or all of the services and/or goods under this solicitation are permitted to be

subcontracted, the bidder shall identify all proposed subcontractor/sub-consultant who will be furnishing services and/or under the terms of this solicitation. Subcontractor/sub-consultants shall conform in all respects to the applicable provisions specified for the prime contractor and shall be subject to approval by HCPSS. If a subcontractor/sub-consultant is determined to be unacceptable by HCPSS, the contractor shall substitute an acceptable subcontractor/sub-consultant with no change in any contract unit prices or overall contract sum. If a firm fails, within a timely manner, to propose another subcontractor/sub-consultant to which HCPSS has no objection, HCPSS reserves the right to reject the proposal. The contractor will use only those subcontractor/sub-consultants approved by HCPSS. All subcontractor/sub-consultants shall comply with all federal and state laws and regulation which are applicable to the services covered by the subcontractor and shall include all terms and conditions set forth herein which apply with equal force to the subcontractor/sub-consultant, as if they were the contractor referred to herein. The contractor is responsible for the contract performance, whether or not subcontractor/sub-consultants are used.

## **2.10 CHANGES ALTERATIONS, OR MODIFICATIONS IN THE SERVICES**

HCPSS shall have the right, at their discretion, to change, alter, or modify the services provided for in this agreement and such changes, alterations, or modifications may be made even though it will result in an increase or decrease in the services of the awarded bidder or in the contract cost thereof.

If such changes cause an increase or decrease in the awarded bidder's cost of, or time required for, performance of any service under this contract, whether or not changed by an order or amendment, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. Any claim of the awarded bidder(s) for adjustment under this clause must be asserted in writing with 30 days from the date of receipt by the awarded bidder(s) of the notification of change unless the project manager or his duly authorized representative grants a further period of time before the date of final payment under the contract.

No services for which an additional cost or fee will be charged by the awarded bidder(s) shall be furnished without prior written authorization of HCPSS.

## **2.10 DELAYS AND EXTENSIONS OF TIME**

The awarded bidder(s) shall execute the work continuously and diligently and no charges or claims for damages shall be made by the awarded bidder(s) for any delays, acceleration, or hindrance, from any cause whatsoever, during the progress of any portion of the services specified in this agreement. Such delays, acceleration, or hindrances, if any, may be compensated for by an extension of time for such reasonable period as HCPSS may decide. Time extensions may be granted only for excusable delays such as delays beyond the control and without the fault or negligence of the awarded bidder(s)

## **2.11 REMEDIES AND TERMINATION**

**a. Correction of Errors, Defects, and Omissions** - The awarded bidder(s) agrees to perform work as may be necessary to correct errors, defects, and omissions in the services required under this agreement without undue delays and without cost to HCPSS. The acceptance of the work set forth herein by HCPSS shall not relieve the awarded bidder(s) of this responsibility.

**b. Set-Off** - HCPSS may deduct from and set-off against any amounts due and payable to the awarded bidder(s) any back-charges or damages sustained by HCPSS by virtue of any breach of this agreement by the awarded bidder(s) to perform the services or any part of the services in a satisfactory manner. Nothing herein shall be construed to relieve the awarded bidder(s) of liability for additional construction and design or other costs, expenses, and damages resulting from a failure to satisfactorily perform the services. Nothing herein shall limit the liability of the awarded bidder(s) for damages and HCPSS may affirmatively collect damages from the awarded bidder(s).

c. **Termination for Cause** - If the awarded bidder(s) fails to fulfill its obligations under this contract properly and on time, otherwise violates any provision of the contract, HCPSS may terminate the contract by providing thirty (30) days' written notice to the awarded bidder(s). The notice shall specify the acts of omissions relied on as cause for termination. All finished or unfinished supplies and services provided by the awarded bidder(s), shall at HCPSS's option, become HCPSS property. HCPSS shall pay fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by awarded bidder's breach.

If the damages are more than the compensation payable to the Consultant, the Consultant will remain liable after termination and HCPSS can affirmatively collect damages.

d. **Termination for Convenience** - HCPSS may terminate all or any part of the work required under this contract for the convenience of HCPSS by providing ninety (90) days' written notice. In the event of such termination, the contract manager shall determine the costs the awarded bidder has incurred to the date of termination. The awarded bidder(s) shall not be reimbursed for any anticipatory profits which have not been earned up to the date of termination. The awarded bidder(s) agrees that the awarded bidder(s) does not have the right to termination for convenience.

e. **Termination for Non-Appropriation of Funds:** HCPSS may terminate this contract, in whole or in part, due to insufficient funding with thirty (30) days' written notice to the awarded bidder(s). HCPSS shall pay for all of the purchases and services, if any, incurred up to the date of the termination notice.

f. **Obligations of Awarded Bidder(s) upon Termination** - Upon notice of termination as provided above, the awarded bidder(s) shall:

- a) Take immediate action to orderly discontinue its work and demobilize its work force to minimize the occurrence of costs.
- b) Take such action as may be necessary to protect the property of HCPSS, place no further orders or subcontract, and assign to HCPSS in the manner and to the extent directed by HCPSS all of the right, title and if ordered by HCPSS, possession and interest of awarded bidder(s) under the orders or subcontracts terminated.
- c) Deliver to HCPSS all materials, equipment, data, drawings, specifications, reports, estimates, and such other information accumulated by the awarded bidder(s) which has been or will be reimbursed under this agreement after taking into account any damages that may be payable to HCPSS. Title to such items shall be transferred to HCPSS.

g. **Remedies Not Exclusive** - The rights and remedies contained in this general condition are in addition to any other right or remedy provided by law, and the exercise of any of them is not a waiver of any other right or remedy provided by law.

## 2.12 RESPONSIBILITIES AND WARRANTIES OF CONSULTANT

- a. The awarded bidder(s) (also referred to herein as "Consultant") shall perform the services with that standard of care, skill, and diligence normally provided by a consultant, or professional in the performance of services similar to the services hereunder.
- b. Notwithstanding any review, approval, acceptance, or payment for the services by HCPSS, the Consultant shall be responsible for professional and technical accuracy of its work furnished by the Consultant under this agreement.

- c. HCPSS's review, approval, or acceptance of, nor payment for, any of the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the Consultant shall be and remain liable to HCPSS in accordance with applicable law for all damages to HCPSS caused by the Consultant's negligent performance of any or the services furnished under this contract.
- d. Consultant warrants that it is qualified to do business in the State of Maryland and that it will take such action as, from time-to-time hereafter, may be necessary to remain so qualified.
- e. Consultant warrants that it is not in arrears with respect to the payment of any monies due and owing the county or state, of any department or agency thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of this agreement.
- f. Consultant warrants that it shall comply with all federal, state, and local law, ordinances and legally enforceable rules and regulations applicable to its activities and obligations under this agreement.
- g. Consultant warrants that it shall procure, at its expense, all licenses, permits, insurance, and governmental approval, if any, necessary to the performance of its obligations under this agreement.
- h. The Vendor agrees that the equipment or supplies furnished under this award and or contract shall be covered by the most favorable commercial warranties the vendor gives to any customer for such equipment or supplies and that the right and remedies provided herein are in addition to and do not limit any rights afforded to the HCPSS by any other clauses of the contract. All equipment shall in the very least carry a standard factory warranty against defects in parts and workmanship for the time period stated in the product warranty specifications and/or for one (1) year from date of acceptance
- i. Consultant warrants that the facts and matters set forth hereafter in the "Contract Affidavit" which is attached to this agreement and made a part hereof are true and correct.

## **2.14 DISPUTES; GOVERNING LAW AND VENUE**

Except as otherwise provided in these contractual documents, any claim, dispute, or other matter in question concerning a question of fact shall initially be referred to the HCPSS Project Manager.

Any claim, dispute, or other matter in question concerning a question of fact referred to the Project Manager that is not disposed of by agreement shall be referred to the purchasing officer, HCPSS, who shall reduce his decision to writing and mail or otherwise furnish a copy to the Consultant. The decision of HCPSS shall be final and conclusive.

The contract shall be governed by the laws of the State of Maryland and nothing in these Contract Documents shall be interpreted to preclude the parties from seeking, after completion or termination of the agreement, any and all remedies provided by law. Any lawsuits arising out of such Contract Documents shall be filed in the appropriate state court of competent jurisdiction located in Howard County, Maryland.

## **2.15 EXAMINATION OF RECORDS**

The Consultant agrees that the auditor of HCPSS or any of their duly authorized representatives shall, have five (5) years after the final renewal expiration date under this contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Consultant involving transactions related to this contract.

## **2.16 DISSEMINATION OF INFORMATION**

During the term of this agreement, the Consultant shall not release any information related to the services or performance of the services under this agreement nor publish any final reports or documents without the prior written approval of the HCPSS contract manager.

## **2.17 NON-HIRING OF OFFICIALS AND EMPLOYEES**

No official or employee of HCPSS whose duties as such official or employee include matters relating to or affecting the subject matter of this contract, shall during the pendency and term of this contract and while serving as an official or employee of HCPSS become or be an employee of the contractor or any entity that is a subcontractor on this contract.

## **2.18 CONTINGENT FEE PROHIBITION**

The Consultant warrants that they have not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee or agent working for the consultant, to solicit or secure this agreement, and that they have not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee or agent, any fee or any other consideration contingent on the making of this agreement.

For breach or violation of this warranty, HCPSS shall have the right to terminate this agreement without liability, or, at its discretion, to deduct from the contract price or consideration, or percentage, brokerage fee, gift or contingent fee.

## **2.19 OWNERSHIP AND USE**

All materials, including but not limited to training documents, program and software, diagnostic equipment and energy information systems furnished by Offeror to HCPSS in connection to this Program shall remain the property of the School System. No materials will be returned to the Contractor at the end of the contract period including any that are copyrighted. HCPSS shall have the right to continue using all and any control equipment and document materials for as long as the School System desires to do so.

All documents, materials or data developed as a result of this contract shall be the property of HCPSS. Therefore, HCPSS has the right to use and reproduce any documents, materials, and data, including confidential information, used in, or developed as a result of this contract. HCPSS may use this information for its own purposes or use it for reporting to state or federal agencies. The awarded bidder(s) must keep confidential and warrants that it has title to or right of use of all documents, material, or data used or developed in connection with this contract.

## **2.20 ADHERENCE TO SCHOOL SYSTEM POLICIES AND STATE AND FEDERAL REGULATIONS**

The Offeror and any Sub-Offeror personnel assigned to this project must be cognizant and

abide by School System policies and operating procedures at all times. Health and safety policies and procedures will not be compromised. Proposed programs must not violate or conflict with the School System policies and procedures. Moreover, the Contractor shall be cognizant and enforce all federal and state regulations and policies and all proposals and subsequent work shall adhere to known regulations and policies.

## **2.21 SEX OFFENDER NOTIFICATION**

Maryland law requires certain sex offenders to register with the local law enforcement agency; See *Maryland Annotated Code*, Criminal Procedure Article, §11-704. One of the purposes of this law is to inform school systems when a Registered Sex Offender is residing or working in the area. When the sex offender registers, the local police are required to notify the Superintendent of Schools, and the Superintendent, in turn, is required to send a notice to school principals.

As a contractor/consultant working for HCPSS we require that you do not employ Registered Sex Offenders to work on projects for our school system if they, as a result, are required to perform delivery, installation, repair, construction or any other kind of services **on HCPSS property**. Further, Maryland Law requires that any person who enters into a contract with a county board of education "may not knowingly employ an individual to work at a school" if the individual is a registered sex offender; See §11-722 Criminal Procedure Article. An employer who violates this requirement is guilty of a misdemeanor and if convicted may be subject to up to five years imprisonment and/or a \$5,000 fine.

Each contractor shall screen their workforces to ensure that a Registered Sex Offender does not perform work at a county public school and also ensure that a subcontractor and independent contractor conducts screening of its personnel who may work at a school. The term "work force" is intended to refer to all of the contractor's direct employees and subcontractors and/or independent contractors it uses to perform the work. Violations of this provision may cause HCPSS to take action against the contractor up to and including immediate termination of the contract for cause.

Additionally, § 6-113 of the Education Article further requires that a contractor or subcontractor for a local school system may not knowingly assign an employee to work on school property with direct, unsupervised, and uncontrolled access to children, if the employee has been convicted of, or pled guilty or nolo contendere to, a crime involving a sexual offense, child sexual abuse and crimes of violence. The Contractor shall submit to HCPSS a listing of any employees assigned to perform under this agreement and certify that the necessary criminal history records checks have been conducted and that all assigned employees comply with the requirements.

## **2.22 CRIMINAL HISTORY BACKGROUND CHECKS**

All employees, agents, or representatives of the awarded bidder(s) who will be performing work on any phase of the contract arising out of this Bid may be subject to a criminal history background check by HCPSS. Such persons, if requested by the school system, must provide fingerprints and other required information to facilitate such a check, as well as pay for the necessary fees to obtain such a check from the federal or state government. At the completion of a background check, the school system may, at its sole discretion, decide that a particular employee, agent, or representative of the Contractor be barred from school system property.

## **2.23 ETHICS**

The Board of Education of Howard County has adopted an Ethics policy. Required by state statute, these Ethics regulations cover members of the Board of Education, the Superintendent, and all employees; and

it specifies limits of participation of these individuals with entities doing business with The Howard County Public School System. For a copy of the regulations, please contact the Purchasing Office, Howard County Department of Education (410) 313-6644.

In accordance with Board Policy 2070-Ethics, offerors are hereby notified that the giving or offering of a gift or series of gifts to a Board official or employee is improper and may result in disqualification from future work on the grounds that the Offeror is no longer a responsible Offeror.

## **2.24 DEBARMENT STATUS**

By submitting their proposal, the offeror(s), certify that they are not currently debarred by the State of Maryland or another governmental entity from submitting bids or proposals on contracts for the type of products or services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.

## **2.25 TOBACCO FREE AND ALCOHOL/DRUG FREE ENVIRONMENT**

The Board of Education of Howard County maintains a tobacco, alcohol/drug free environment. The sale or use of tobacco, alcohol or drugs, in any form, or related product, is prohibited in school buildings and grounds at all times. Persons found violating this policy will be requested to remove the product and themselves from school premises. Repeated use or sale of tobacco on HCPSS property, or any use or sale of alcohol, misuse of other drugs, or any use of illegal drugs by a contract employee while servicing this contract or while on HCPSS property will result in a prohibition of that employee from servicing the HCPSS contract. Repeated instances of violations by contract employees may result in termination of the contract for cause.

## **2.26 INDEMNIFICATION**

The Awarded Bidder(s) shall be responsible for any loss, personal injury, expense, death and/or any other damage which may occur by reason of its acts, negligence, willfulness, or failure to perform any of its obligations under this agreement. Furthermore, any acts on the part of any agent, director, partner, servant or employee of the Contractor are deemed to be the Contractor's acts.

Contractor agrees to indemnify and hold harmless the Howard County Public School System and its Board, employees, agents, representatives, and students from any claim, damage, liability, expense, and/or loss, including defense costs and attorney fees, arising directly or indirectly out of the Contractor's performance under this agreement. The indemnification obligation of the Contractor shall include but shall not be limited to injuries to individuals and property of individuals who are not parties to the contract. In addition, the indemnification obligation of the Contractor shall cover the acts or omissions of any permitted subcontractors hired by the Contractor. Furthermore, the indemnification obligation of the Contractor shall survive termination of the contract for any reason.

## **2.27 PERMITS, CODES AND LAWS**

All work shall be in accordance with all State, County, Federal, and Governmental rules, regulations, and laws. The contractor is responsible for assuring that all of their employee and services provided under the contract follow and comply with any such requirements pertaining and applicable to the service being provided under this contract. All costs to comply with these requirements shall be paid by the contractor and included in the contractor's Bid price.



## **2.28 RIGHT TO STOP WORK**

If HCPSS determines, either directly or indirectly, that the Contractor's performance is not within the specifications, terms or conditions of this bid and/or that the quality of the job is unacceptable, HCPSS has the right to stop work. The stoppage of work shall continue until the default has been corrected and/or corrective steps have been taken to the satisfaction of HCPSS. HCPSS also reserves the right to e-bid this contract if it is decided that performance is not within the specifications as set out.

## **2.29 NON-DISCRIMINATION**

In the execution of the obligations and responsibilities hereunder, included, but not limited to hiring or employment made possible by or relating to the Contract Documents, or the provisions of goods and services provided, the awarded bidder(s) shall not discriminate against persons on the basis of race, color, creed, national origin, political affiliation, religion, physical or mental disability, age, gender, marital status, or sexual orientation. For more information, contact the Equity Assurance Office of the Howard County Public School System at 10910 Route 108, Ellicott City, ND 21042 or call 410-313-6654.

HCPSS is fully committed to the Americans with Disabilities Act (ADA) which guarantees non-discrimination and equal access for persons with disabilities in employment, public accommodations, transportation, and all County programs, activities, and services. HCPSS government contractors, subcontractors, vendors, and/or suppliers are subject to this ADA policy. All individuals having any County contractual agreement must make the same commitment. Your acceptance of the awarded contract acknowledges your commitment and compliance with ADA.

## **2.30 INDEPENDENT CONTRACTOR**

It is expressly understood and agreed that this Agreement is not intended and shall not be construed to create the relationship of agent, servant, employee, partner, joint venture, or association between the parties. The awarded bidder(s) will not be entitled to and expressly disclaims any right to worker's compensation, retirement, insurance, or other benefits afforded to employees of HCPSS.

## **2.31 PRICE ADJUSTMENTS**

HCPSS will only consider adjustments on labor rates based only upon federal minimum wage increases and decreases in the Consumer Price Index (CPI-W), Baltimore Region, as published by the Bureau of Labor Standards. Requested increases above a 5% cap will not be considered. In order to receive consideration for a price increase, the Contractor must submit to The Howard County Public School System, sixty (60) days prior to the contract expiration date, a statement of any change in the hourly rate wage actually to be paid to its employees during the renewal term.

Adjustments will be calculated by comparing the current index with the previous year's index so as to determine the change in index points. The point change will then be divided by the price index to obtain the percentage of change. The percentage of change will then be multiplied by .75 to obtain the adjustment to be applied to the current prices.

The HCPSS will also consider adjustments based on fees outside of the control of the Contractor, such as manufacturer price increases. However, such increases will be a "pass through" to the Howard County Public School System with no markup allowed. For such changes to be considered by the Howard County Public School System, documentation from the manufacturer (or any other applicable party) assessing a cost increase must accompany a written request from the Contractor. The Howard County Public School System will then review

the request and advise the Contractor of approval or disapproval of the price change request. Price increase requests will not be considered if not accompanied with the proper information.

### **2.32 CONTRACTOR PERFORMANCE/EVALUATION SCORECARD**

Upon completion of a project/service or at any time during the project/service, the awarded contractor shall receive a performance evaluation scorecard rating the contractor's performance on the project/service, see Appendix G. The evaluation scorecard will become part of the contractor's permanent file. A sample Contractor Performance/Evaluation Scorecard is included with the bid documents.

The evaluation scorecard shall include the following performance indicators: Quality of Work, Responsiveness, Professionalism, Resources, Schedule Management, Quality Control, Deficiency Resolution, Submittal Management, Training, Appearance, Security, Safety, Utility Conservation, Disruptions, Quality of Materials, Emergency Response, Hazardous Materials, Innovation, Teamwork, Cost Management, Billing, Compliance. A contractor shall have up to 3 weeks after notification to appeal, challenge or otherwise dispute the scorecard results. After the 3-week period, the scorecard shall be considered final and accepted by the contractor.

A contractor receiving a 70% or less overall evaluation scorecard rating for a project/service may be disqualified for bidding on any future project/service with the HCPSS for a period of three (3) years and/or for the remaining contract term including renewal options.

### **2.33 ANTI-BRIBERY**

Awarded bidder(s) warrants that neither it nor any of its officers, directors, or partners nor any of its employees who are directly involved in obtaining or performing contracts with any public body has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or of the federal government.

### **2.34 LICENSES AND QUALIFICATIONS**

Bidders must be licensed to do business in the State of Maryland and shall submit proof upon request.

HCPSS reserves the right to require that the contractor demonstrates that it has the skills, equipment and Other resources to satisfactorily perform the nature and magnitude of work necessary to complete the project within the proposed contract schedule.

### **2.35 BINDING AGREEMENT**

This agreement supersedes any and all understandings or agreements, either oral or written, between the Board and the contractor, and constitutes the entire binding agreement upon the parties and their respective successors.

### **2.36 SIGN-IN REQUIRED AT HCPSS BUILDINGS**

Contractors will be required to sign-in and sign-out with the Front Office at each site upon arrival for assigned games. As well, contract employees shall conduct themselves in a professional manner while on The Howard County Public School System's premises. Any employee found to disregard the nature of the school system's surroundings shall be removed from the premises and may be prohibited from further servicing the HCPSS contract.

### **2.37 MOST FAVORABLE TERMS**

If more favorable terms are granted by the contractor to any similar agency in any state in a contemporaneous agreement let under the same or similar financial terms and circumstances for comparable supplies and services, the more favorable terms will be applicable under this agreement between HCPSS and the contractor.

## **2.38 NON-COLLUSION**

By signing and submitting a Bid/proposal under this solicitation, the vendor certifies that it has neither agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the bid or offer being submitted herewith; bidder also certifies that it has not in any manner, directly or indirectly, entered into any agreement, participated in any collusion to fix the bid price or price proposal of the bidder or vendor herein or any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the bid or offer is submitted.

## **2.39 SPECIFICATIONS AND SCOPE OF WORK**

The specifications listed herein may or may not specify all technical requirements which are needed to achieve the end result. When accepting the award, the bidder assumes the responsibility of accomplishing the task requested in this document. Any omission of parts, products, processes, etc. in the specifications are the responsibility of the bidder and HCPSS will not bear the responsibility of their omission. If omissions in the specifications are discovered and these omissions will impact on the contract price then it is the responsibility of the bidder to note these omissions in writing to the purchasing representative, prior to accepting the award. If these omissions are not properly noted in writing prior to award, then the bidder's silence is deemed as full and complete acceptance and any additional costs will be borne by the bidder.

## **2.40 BRAND NAME OR EQUAL**

Where a particular manufacturer's brands or models are referenced, it is to be interpreted as being descriptive and not restrictive and is to indicate the quality and characteristics of products that will be satisfactory. Bids will be considered on models or brands or products of manufacturers other than those cited if accompanied by specifications, catalogs, test reports, brochures, or other descriptive literature and supporting data, sufficient in detail to permit evaluation and determination that the item offered fully meets the salient characteristics and is of equal type and equal or better quality without reservations or further reference. It is the responsibility of the Bidder to provide the foregoing documentation with the Quote at the date and time set forth for submission. The burden of proof that proposed alternates are in fact equal or better falls on the Bidder and proof must be to the satisfaction of HCPSS. Quotes received for proposed equal/substitute items without the required documentation to support the bidders claim will not be considered responsive. It is not the responsibility of HCPSS to locate or secure any further information regarding the proposed alternate product.

Howard County Public Schools reserves the right to request any proposed equipment or supplies free of charge for a reasonable testing period to determine its suitability to the School Systems needs and requirements.

The Howard County Public School System shall be the sole authority as to whether proposed substitute items meet specifications or are an approved equal and further reserves the right to reject any or all proposals or waive any informality which may appear to be in its best interest. The HCPSS decision of approving or disapproving of a proposed equal shall be final.

When only one manufacturer or model is referenced, the absence of anything to the contrary will be interpreted as a bid on the exact item specified. Bidders offering proposed equal/substitute items other than those specified must state the product name, model and manufacturer.

Where several manufacturers of models are referenced as being equally acceptable and the bidder does not indicate what particular model or brand he is bidding on, the Purchasing Office shall have the right to select the brand or model referenced.

## **2.41 PROPOSED SUBSTITUTIONS**

Bidders offering items other than those specified must state the product name, manufacturer, Stipulated cost adjustment (add, Deduct or no charge) in the space provided on the form of proposal and, as well,

submit detailed technical specifications for each item. All data submitted must contain sufficient information to facilitate equating the offer.

No Substitutions will be considered prior to receipt of the Bid. The award will be made solely on the basis of the Base Bid, Alternate Bids with regard to proposed substitutions and deducts when requested.

Bidders bidding on a substitute MUST submit product literature with their bid. Referencing literature shall be accompanied by complete submittals in accordance with the specification of catalogs, test reports, brochures, and other descriptive literature and supporting data, sufficient in detail to permit evaluation of the proposed substitution without further reference. All proposed substitutions shall document and demonstrate meeting or exceeding the project requirements.

Bids received for items without the required literature and sufficient documentation for making a determination will not be considered responsive.

The Howard County Public School System shall be the sole authority as to whether items meet specifications or are an approved equal and further reserve the right to reject any or all proposals or waive any informality which may appear to be in its best interest.

#### **2.42 REFERENCES**

The Howard County Public School System reserves the right to contact any references available in order to evaluate product/service. Cited references must be able to confirm, without reservation, your company's ability to provide the level of service/product mandated in this solicitation. References from other public school systems or governmental agencies are preferred. Howard County Board of Education also reserves the right to request additional references as needed and to reject any bid based on an unsatisfactory reference.

#### **2.43 DAMAGE**

Successful Bidders will be held responsible for and be required to make good at their own expense, any and all damage done or caused by the Bidder or by its employees while executing the contract.

#### **2.44 PROCUREMENT CARD**

The Howard County Public School System utilizes a Purchasing Card Program. Purchases resulting from this solicitation may be made through a Visa/Mastercard credit card. Bidders are prohibited from charging any additional costs/fees above and beyond the established contract prices to process such orders. Bidders lacking Visa/Mastercard capability should contact the Purchasing Office.

#### **2.45 TRADE DISCOUNTS**

All prices offered must be the lowest net price after trade discounts have been applied. Bids offering a percentage off list prices will not be accepted unless: otherwise specified.

#### **2.46 TIME DISCOUNTS**

Prompt payment discounts are solicited and will be treated as follows:

Discounts offered which allow a minimum of twenty (20) days to qualify will be deducted from prices offered in the bid for the purpose of determining the lowest price offered.

Discounts offering less than twenty (20) calendar days will not be deducted from the price offered for the purpose of determining the lowest price but will be taken if payment is made within the discount period.

In computing prompt payment discounts, the date of delivery of the supplies or completion of services or receipt of correct invoices in the offices specified will be considered and the later date prevail.

## **2.47 IDENTIFICATION**

All contractor personnel, working in or around buildings designated under this contract, shall have a valid driver's license or photo ID in their possession at all times and wear distinctive uniform clothing while on the school system's premises.

Contractors will be required to provide identification and sign-in and sign-out at the front office at each site on a daily basis during the course of each project.

The contractor shall determine and provide additional personal protective equipment required for the safe performance of work. Protective clothing, equipment, and devices shall, as a minimum, conform to Occupational Safety and Health Administration (OSHA) standards for the products being used. Vehicles used by the contractor must be identified in accordance with state and local regulations and, if applicable, be labeled with an appropriate license number identifying the company's business license.

## **2.48 BEHAVIOR OF CONTRACTOR EMPLOYEES**

Howard County Public School System is committed to providing a work and study environment that is free from discrimination and harassment based on race, color, religious creed, ancestry, national origin, age, sex, marital status, handicap, pregnancy, or status as a disabled veteran or veteran of the Vietnam era. Behavior contrary to this philosophy, which has the purpose or effect of creating an intimidating, hostile, or offensive environment, will not be tolerated by HCPSS, and it is the Contractor's responsibility to ensure that such behavior by its employees, agents, and subcontractors does not occur. The policy extends to maintaining an environment free from sexual harassment. Therefore, sexual advances or sexual remarks, requests for sexual favors, and other verbal or physical conduct of a sexual nature must not be condoned or permitted by the Contractor. This prohibition extends to such harassment within the employment context as well as harassment of students, staff, and visitors to the HCPSS. It should be assumed that all sexual behavior by the Contractor's employees, agents, and subcontractors on any campus or facility of HCPSS, whether owned, operated, maintained, or leased by the HCPSS, is improper and unwelcome. The Contractor will also ensure that all technicians who work with HCPSS users exhibit a high degree of professionalism in their dealings with those users. The Contractor's employees and subcontractors shall be subject to and comply with all applicable HCPSS rules, regulations and policies which shall include those regulations relating to safety, security, and campus parking. If deemed necessary, HCPSS reserves the right to demand the removal of any of the Contractor's employees/subcontractors from duty on its premises as a result of their violation of the standards set forth herein.

## **2.49 SCHOOL CALENDAR**

The school calendar shall acquaint bidders with the days schools have scheduled closings. It shall be the successful Bidder's responsibility to become aware of nonscheduled closings due to inclement weather or other causes.

See <http://www.hcpss.org/calendar/> for current calendar.

## **2.50 LEAD PAINT: 40 CFR PART 745 RENOVATION, REPAIR, AND PAINTING RULE**

Any contractor disturbing known lead-based paint surfaces of greater than 6 square feet (interior) and 20 square feet (exterior) in HCPSS facilities constructed prior to 1978 and within areas housing children under the age of 6 years shall comply with Environmental Protection Agency's (EPA) 40 CFR Part 745, herein known as the "Rule". The Contractor shall be a certified firm, employ a certified renovator, and follow proper lead paint work practices.

A certified firm is a company who has successfully registered with the EPA. A certified renovator is an individual from the firm who successfully completed an accredited EPA 8-hour class per the Rule.

Examples of impacted areas may include kindergarten classrooms, early childhood classrooms, restrooms commonly used by children under 6 years of age, elementary cafeterias and gymnasiums, before and after

care rooms, and high school teen's childcare environments. Exterior work is impacted by this Rule if within 10 feet of windows and/or doors to an interior classroom housing children under the age of 6 or an outdoor activity area, such a macadam or mulched play area.

HCPSS will identify the presence or absence of lead base paint within affected work areas and documentation will be made available upon request.

HCPSS will provide project notification and educational pamphlets as required per the Rule.

Contractor is to notify HCPSS project manager and/or Office of Safety, Environment, and Risk Management when work area is ready for a Cleaning Verification Procedure as defined by the Rule. HCPSS will provide a certified third party to perform dust sampling. EPA's visual verification card will not be accepted.

The Contractor's Certified Renovator shall be present as per the Rule during posting of signs, work area setup, and work area clean-up. Upon a request, the Certified Renovator shall be able to physically respond on-site within two hours. HCPSS project manager and/or Office of Safety, Environment, and Risk Management will sign related documents for the Contractor as required per the Rule.

## **2.51 BARRICADES AND WARNING SIGNS**

The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public. Effective barricades shall protect all highways and other department facilities closed to vehicular traffic, and obstructions shall be illuminated during hours of darkness with electric lights.

## **2.52 PRESERVATION AND RESTORATION OF PROPERTY**

The Contractor shall be responsible for all damage or injury to property or any character during the execution of the work, resulting from any act, omission, neglect or misconduct in his manner or method of executing said work satisfactorily, or due to his non-execution of said work, or at any time due to defective work or materials; and said responsibility shall not be released until the work has been completed and accepted. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work or in consequence of the non-execution thereof on the part of the Contractor, he shall restore, at his own expense, such property to a condition similar to, or equal to, that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner. In case of the failure to make good such damage or injury, the Board of Education may, upon 48 hours' notice, proceed to repair, rebuild, or otherwise restore such property as may be deemed from any monies due to which may become due the Contractor under this contract.

Further deterioration of the property site, over and above the estimated repair cost, as a result of weather, vandalism, etc. shall be negotiated for repair using a square foot, lineal foot, or square yard basis.

Contractor is responsible for seeding and strawing all disturbed areas. Seed mix MUST be certified seed approved by the contract manager prior to application.

## **2.53 FINAL CLEANING**

Upon completion of the work specified in the contract and before final payment will be made, the work area and all other adjoining areas occupied by the Contractor during the performance of said contract shall be cleaned of all surplus and discarded materials, spilled materials, and excess materials left from the permanent work as a result of the Contractor's operations. The areas mentioned above will be restored, as they existed prior to work.

## **2.54 INSPECTION OF PREMISES**

If a site visit is recommended or required, each bidder is responsible for requesting access to the site(s) prior to submitting a bid in order to observe the existing conditions affecting the work, and to obtain such details as, but not limited to the availability of utilities or the precise dimensions of the area(s) involved. No allowance will be made to the successful Bidder, at a later date for additional work cost required because of his/her failure to visit the site and to acquaint themselves with all the requirements and conditions for properly estimating the cost of successfully performing the work.

## **2.55 BUILDING/SITE OCCUPANCY**

Under no circumstances shall any driveway, access road or walkway be blocked by the Contractor's vehicles to prohibit use of, or disruption to pedestrian or vehicular traffic to the buildings or site.

## **2.56 MAINTENANCE OF MANPOWER**

Any staff changes of a proposed team for this contract must be reported to the HCPSS contract manager and reviewed and approved by HCPSS prior to any reassignments being made.

## **2.57 CARE OF PREMISES**

Precautions taken for safety and protection shall be in accordance with the mandatory requirements of the safety codes prevailing within the jurisdiction in which the work is to be performed. During the performance of the Contract, the Contractor shall take the necessary precautions to protect all areas upon which, or adjacent to which, work is performed as a part of this Contract. Any damage caused as a result of Contractor's neglect, directly or indirectly, shall be repaired to the School System's satisfaction at the Contractor's expense. If the Contractor fails or refuses to make such repair or replacement, HCPSS will determine a cost and the Contractor shall be liable for the cost thereof, which may be charged or deducted from the Contractor price.

## **2.58 CONTRACTOR'S COORDINATOR**

The Contractor shall provide, at least one person who shall be designated as the Project Manager and have one (1) 100% on-site Supervisor. The Project Manager shall be the Contractor's agent for reviewing the project in the field when required with the school system's representatives and shall be the channel for all inquiries concerning work in progress or work to be started under this Contract. The Supervisor shall manage the job on-site and supervise all on-site personnel.

The Project Manager should be readily available to review all phases of the project when requested by the school system. The Contractor shall notify the school system for his approval of any changes in persons designated as Project Manager.

## **2.59 PRIME CONTRACTOR SUPERVISORY RESPONSIBILITIES**

The contractor shall be responsible for supervising and directing the work under this contract and all subcontractors that he may utilize, using his best skill and attention. Subcontractors who perform work under this contract shall be responsible for the acts and omissions of his subcontractors and of persons employed by them as he is for the acts and omissions of his own employees. The contractor will be responsible for ensuring that the supervisor or lead worker, including subcontractors, can communicate with School System's staff in English in fulfilling the terms of the contract.

## **2.60 HCPSS CONTRACT MANAGER**

The Howard County Public School System's Contract Manager for any resulting contract shall be Mr. Tony Bonomo, Building Services (410) 313-7084, tony\_bonomo@hcpss.org. The contract manager will be responsible for the day-to-day administration of the contract after award. The awarded vendor shall work directly with the designated Contract Manager and/or his designated assistant and not act on any instructions, direction, or information given to them by any other HCPSS personnel.

## **2.61 CONTRACT**

If a contractor's proposal is accepted and awarded, it will become the contract. By submitting a bid proposal/offer, the awarded contractor hereby agrees and understands that all parts of the Bid document, attachments, Terms and Conditions, addendums and all associated documents or any other extraneous matter incorporated by reference will be applicable to any contract(s) awarded as the result of this Request for Bid.

## **2.62 CONDITIONAL BID**

No conditional Bids will be accepted, which contain item such as, but not limited to an escalator clause, minimum delivery amounts other than that indicated, packaging or delivery charges, or any add-on or irregular figures. The prices offered shall be the final cost to The Howard County Public School System.

## **2.63 CANCELLATION OF BID**

Howard County Public Schools reserves the right to cancel this Bid solicitation or to reject any or all Bids in whole or in part at the sole discretion of the Director of Purchasing if he/she determines that it is fiscally advantageous or in the best interest of HCPSS to cancel the bid.

## **2.64 TAXES**

The Howard County Public School System (HCPSS) is a Public School System in the State of Maryland and is tax exempt. The price quoted shall not include federal excise taxes, state or local taxes, or use taxes.

- FEDERAL TAX ID: 52-6000968
- MARYLAND SALES TAX: 30001219
- FEDERAL EXCISE TAX: 52-73-0257K

## **2.65 BIDDER'S QUALIFICATIONS**

Bidders may be required to furnish satisfactory evidence that they are qualified dealers suppliers or manufacturers of the items or services listed, or regularly engaged in performing the services on which they are bidding, and in both cases maintain a regularly established place of business. An authorized representative of The Howard County Public School System may visit any prospective contractor's place of business to determine his ability, capacity, reliability, financial stability, and other factors necessary to perform the contract.

Bidders must be authorized distributors for items listed in this bid. The Howard County Public School System reserves the right, before awarding the contract, to require Bidders to submit evidence of qualification as it may deem necessary, in order to determine the Bidder's qualifications and abilities.

Howard County Public Schools reserves the right to make such reasonable investigations and/or inspection of any bidder's place of business/facilities prior to award of the contract to satisfy questions regarding the bidder's capabilities and responsibility.



## **2.66 INDEPENDENT CONTRACTORS**

The contractor is an independent contractor. The contractor and the contractor's employees or agents are not agents of HCPSS.

## **2.67 PURCHASE ORDER**

Orders shall be in the form of an official Howard County Public School System Purchase Order. The Purchase Order will serve as the contract and all documents listed under the contract section shall be made part of the final Purchase order contract. No deliveries or services are to be made under any contract resulting from this bid without a purchase order.

## **2.68 ASBESTOS, HAZARDOUS OR TOXIC SUBSTANCES**

No products shall contain asbestos materials. Any products from Vendor/supplier found to be containing asbestos materials shall be promptly removed from HCPSS property at the expense of the Vendor/Supplier. Vendor/Supplier may be required to submit documentation stating that the products bid do not contain asbestos materials.

Bidders must comply with all applicable Federal, State, and County laws, ordinances and regulations pertaining to shipping, handling, distribution and access to information about hazardous and toxic substance and as amended from time to time.

## **2.69 MATERIAL SAFETY DATA SHEETS**

Pursuant to Occupational Safety and Health Act (OSHA) 29CFR1910, MSDS for the products supplied or used as a result of this contract must be attached to each shipment of product as well as mailed to:

The Howard County Public School System  
Insurance / Safety and Risk Management  
10910 Clarksville Pike  
Ellicott City, MD 21042

MSDS must show the contract number under which the products were supplied or used.

## **2.70 PERFORMANCE REQUIRMENTS**

All items are to be UL tested.

The descriptions and standards identified for each item are minimally acceptable performance criteria as determined by the Board of Education. The Board of Education shall be the sole determinant as to whether products meet or exceed criteria. The owner's personnel shall have the right to reject any items which, in their opinion, do not conform to standards. Rejection may be at time of, or after, delivery. The Contractor shall be required to remove rejected items within 72 hours of notification.

## **2.71 USE AND OWNERSHIP**

All documents, materials or data developed as a result of this contract shall be the property of HCPSS. Therefore HCPSS has the right to use and reproduce any documents, materials, and data, including confidential information, used in or developed as a result of this contract. HCPSS may use this

information for its own purposes, or use it for reporting to state or federal agencies. The contractor must keep confidential and warrants that it has title to or right of use of all documents, material, or data used or developed in connection with this contract

## **2.72 PROPRIETARY OR CONFIDENTIAL INFORMATION**

Bidders must specifically identify those portions of their proposal, if any, which they deem to contain confidential or proprietary information of trade secrets and must provide justification to be considered by HCPSS in determining whether such material, upon request, should not be disclosed. All requests for information shall be handled in accordance with the freedom of Information Act.

## **2.73 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS**

The contractor shall carefully study and compare the Bid request documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the work for which the quote is submitted, shall examine the site and local conditions, and shall at once report to the Architect errors, inconsistencies or ambiguities discovered. Contractors and sub-contractors requiring clarification or interpretation of the quote documents shall make a written request which shall reach the Construction Manager and Architect at least Seven business days prior to the date for receipt of the Bid.

## **2.74 INCLEMENT WEATHER OR OTHER UNANTICIPATED HCPSS CLOSINGS**

In the event that Howard County Public Schools are closed for students on the scheduled bid due date, but the Purchasing Office located in the Administrative/Central Offices are open then the bids will be due as specified in the original documents. In the event the Schools have a delayed opening on the date bids are due, the bid date and time will not change. In the event that the HCPSS Administrative/Central Offices are closed as the result of inclement weather or for other unanticipated reasons, Bids will be due on the next day that the Administrative/Central Office is officially open, at the same time specified. It is the bidder's responsibility to check the closure announcements on the HCPSS main web-site page [www.hcpss.org](http://www.hcpss.org) to confirm that it specifically identifies that the Administrative/Central offices are closed

## **2.75 ADDENDA AND CHANGES**

Howard County Public Schools reserves the right to change the contents of this solicitation where necessary for the proper fulfillment of the intention of this request. Changes will be made in the form of written addenda and posted to the HCPSS Purchasing web site at [www.hcpss.org/about-us/purchasing/current-bids/](http://www.hcpss.org/about-us/purchasing/current-bids/).

It is the bidder's sole responsibility to monitor the Purchasing web site to ensure that they downloaded any posted addenda or documents prior to submitting their bid and duly acknowledge receipt of said addenda on the proper bid form. It is highly recommended that the submitting bidder ascertain if they have downloaded all the addend posted prior to the closing date. Failure to do so may result in non- receipt of important information and may not relieve such bidder from any obligation under his/her bid submittal.

## **2.76 ERRORS IN BIDS**

Should any bidder be in doubt as to the meaning of the specifications, or should he/she find any discrepancy or omission, he/she shall notify in writing the HCPSS Purchasing Department representative contact as indicated in the solicitation document. All bidders will be notified in writing of clarification by means of addenda posted on the HCPSS Purchasing Current Bids Website.

Failure of the bidder to thoroughly understand all aspects of the Invitation for Bid before submitting his bid will not act as an excuse to permit withdrawal of his bid nor secure relief or plea of error.

Neither law nor regulation makes allowance for errors of omission on the part of the bidders

## **2.77 MULTIPLE PRICES**

No bidder will be allowed to offer more than one price on each item regardless of the availability of several items that they feel may perform the same function or meet the specification as the item(s) described in the solicitation. The bidder must determine for themselves which item to offer and submit one price only. If said bidder should submit more than one price on any item all prices for that item may be rejected at the discretion of HCPSS.

## **2.78 BID ACCEPTANCE**

Unless otherwise stated by the bidder in his bid, prices offered will be considered to allow one hundred twenty (120) days for acceptance. At the end of the (120) days, the bid may be withdrawn at the written request of the bidder. If the bid is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

## **2.79 BILLING AND PAYMENT**

The contractor shall submit invoices to the Howard County Department of Education, (Name of School/Department), 10910 Rt. 108, Ellicott City, MD 21042, Attn: (Name of Contact), at the completion of each job. Invoices must contain the following information:

- a) Purchase Order Number
- b) Name of school
- c) Description of work along with quantities
- d) Start date and completion date
- e) Total due

## **2.80 CONDITIONAL BIDS**

No conditional bids will be accepted, which contain item such as, but not limited to an escalator clause, minimum delivery amounts other than that indicated, packaging or delivery charges, or any add-on or irregular figures. The prices offered shall be the final cost to The Howard County Public School System.

## **2.81 PRICE**

Prices shall be all inclusive and shall include all cost of every kind such as, but not limited to delivery and Installation costs to The Howard County Public School System.

## **2.82 SAMPLES**

When requested, samples shall be provided at no cost to the Howard County Department of Education Purchasing Department no later than the scheduled bid opening date and time. All sample packages shall be marked "Sample" with a label that indicates the full Bid Title, Bid Number, Opening date and time, Name and Address of Bidder, and item number. All samples must be properly tagged or labeled and clearly identified. Samples are not required when none are requested.

In the event the Purchasing Office requests a sample after the bid opening, the sample shall be delivered within ten (10) days of request for award consideration. Delivery of samples shall be to: The Howard County Public School System, Attn: Purchasing, 10910 Clarksville Pike, Ellicott City, Maryland 21042.

In the event a sample is consumed or destroyed in the evaluation process, The Howard County Public School System shall be held harmless and not liable for any cost of sample(s).

Samples must be picked up within ten (10) days after contract award, after which samples will be considered abandoned and will become the property of the Board of Education.

Samples from the successful Bidder may be held during the contract performance period as a standard of quality and will be available for return upon contract completion.

### **2.83 PROCUREMENT CARD**

The Howard County Public School System utilizes a Purchasing Card Program. Purchases resulting from this solicitation may be made through a Visa/Mastercard credit card. Bidders are prohibited from charging any additional costs/fees above and beyond the established contract prices to process such orders. Bidders lacking Visa/Mastercard capability should contact the Purchasing Office.

### **2.84 INVOICE AND PAYMENT**

The Contractor shall submit invoices in triplicate to the Howard County Department of Education, 10910 Clarksville Pike (Route 108), Ellicott City, MD 21042-6198, Attn: (Name of ordering contact person), Invoices must contain the following information:

- a) Purchase Order Number
- b) Name of school
- c) Description of work along with quantities
- d) Start date and completion date
- e) Total due

### **2.85 DELIVERY**

All orders and shipments must be prepaid. Shipped by truck or Parcel Post to the designated School(s)/Office(s) location(s), as specified on the Purchase Order. If Prices do not include delivery charges, please prepay and add to invoice.

Deliveries shall be made between 8:30 a.m. - 3:00 p.m., Monday through Friday, except holidays. Delivery time and location shall be as specified on the purchase order. Twenty-four hour notice prior to delivery is required. Orders not completed within the specified time period will be subject to cancellation without penalty and at the sole option of Howard County Public School System.

All products delivered under this contract shall be packed in accordance with accepted trade practices and no charge may be made over and above the bid price for packaging, or for deposits or containers unless specified in the bid.

Upon delivery, personnel may reject any items that, in their opinion, are damaged. Rejection may be at the time of, or after, delivery. Items rejected are to be returned and reshipped at no cost to The Howard County

Public School System. HCPSS will attempt to inspect deliveries as promptly as possible, but failure to inspect and accept or reject shall not impose a liability on HCPSS for such items that are damaged or not in accordance with the specifications.

Prices are to include all freight and delivery charges.

The Howard County Public School System reserves the right to order awarded items as needed throughout the contract year at no additional charge to the school system.

Orders are to be delivered in full within the time set in the specifications unless stated otherwise on the purchase order.

The Howard County Public School System will not sign for or assume responsibility of deliveries until they have been properly unloaded by the Contractor's delivery personnel at the School/Office location.

## **2.86 MATERIAL SAFETY DATA SHEETS**

Pursuant to Occupational Safety and Health Act (OSHA) 29CFR1910, MSDS for the products supplied or used as a result of this contract must be attached to each shipment of product as well as mailed to:

The Howard County Public School System  
Insurance & Safety  
10910 Clarksville Pike  
Ellicott City, MD 21042

## **2.87 WARRANTY**

The Vendor agrees that the equipment or supplies furnished under this award and or contract shall be covered by the most favorable commercial warranties the vendor gives to any customer for such equipment or supplies and that the right and remedies provided herein are in addition to and do not limit any rights afforded to the Board of Education by any other clauses of the contract.

All equipment shall in the very least carry a standard factory warranty against defects in parts and workmanship for the time period stated in the product warranty specifications and/or for one (1) year from date of acceptance.

The vendor expressly warrants that all articles, material and work offered shall conform to each and every specification, drawing, sample or other description which is furnished to or adopted by the HCPSS and that they will be fit and sufficient for the purpose intended, merchantable, of good material and workmanship, and free from defect. The awarded vendor shall be responsible for handling all warranty issues directly with the manufacturer and agrees to any repairs, labor, replacements, or necessary adjustments because of such defects to be made promptly by him/her and without cost to and the satisfaction of HCPSS.

## **2.88 VENDOR CONTRACT ADMINISTRATION**

Bidders shall designate internal and external contract administrators to administer the contract. Bidders are to list the names and telephone numbers in the appropriate space on the CONTRACTOR INFORMATION sheet for these individuals.

## **2.89 MULTI-AGENCY PARTICIPATION**

Under §5-112, Paragraph (3) of the Education Article of the Annotated Code of Maryland HCPSS may with Board of Education approval participate in contracts for goods or commodities that are awarded by other public agencies or by intergovernmental purchasing organizations if the lead agency for the contract follows the public bidding procedures. HCPSS therefore reserves the right to extend the terms and conditions of

this solicitation to any and all other agencies within the state of Maryland as well as any other federal, state, municipal, county, or local governmental agency under the jurisdiction of the United States and its territories. This shall include but not limited to private schools, parochial schools, non-public schools such as charter schools, special districts, intermediate units, non-profit agencies providing services on behalf of government, and/or state, community and/or private colleges/universities that require these goods, commodities and/or services. A copy of the contract pricing and the bid requirements incorporated in this contract will be supplied to requesting agencies.

Each participating jurisdiction or agency shall enter into its own contract with the Award Bidder(s) and this contract shall be binding only upon the principals signing such an agreement. Invoices shall be submitted in duplicate "directly" to the ordering jurisdiction for each unit purchased. Disputes over the execution of any contract shall be the responsibility of the participating jurisdiction or agency that entered into that contract. Disputes must be resolved solely between the participating agency and the Award

## **2.90 RESOLUTION OF DISPUTES**

Bid rejection for non-responsiveness and/or non-responsibility shall be made using the criteria guidelines as stated in the General Provisions of Bid Proposal, Terms and Conditions, and Technical Specifications if any.

After bid opening and bid review, but prior to bid award, if a Bidder's entire bid is declared to be nonresponsive and/or non-responsible, the Bidder will be notified as to the reason(s) for rejection.

Protests shall be filed in writing to the Purchasing Office within two days after notification

Protests shall include the basis for the protest or appeal, complete in all respects, with relief sought, and whether the protester wishes to have a hearing with respect to the protest or appeal.

Protests shall be addressed to Howard County Department of Education, 10910 Clarksville Pike, Ellicott City, Maryland 21042, Attention: Buyers Name, labeled "Protest" and the Bid Number. The written protest shall include as a minimum the following:

- a) Name and address of the protester
- b) Appropriate identification of the bid
- c) Supporting exhibits, evidence, and/or documents to substantiate any claims.
- d) Suggested remedy(ies).

## **2.91 MARYLAND MARKETPLACE (eMMA) Requirement**

The Maryland state law requires Howard County Public Schools to Publish notice of Procurement solicitations and awards on eMaryland Marketplace Advantage (eMMA). The requirement extends only to contracts procured through competitive sealed bidding, competitive sealed proposals, noncompetitive negotiations, and procurements whose value equals or exceeds that for State contracts that must be published on eMMA. Bidders on this solicitation and any future solicitation posted on eMMA are now required to register as a vendor/contractor with eMMA at <https://procurement.maryland.gov>. If you are not already registered with eMMA please do so prior to submitting your bid. It is required that you provide your eMMA contractor number on the price page form when you submit your proposal. Registration with eMMA is free. If you have any questions or need assistance, contact their help desk at [emma.helpdesk@maryland.gov](mailto:emma.helpdesk@maryland.gov) or call (410)767-1492.

## SECTION 000730

### MINORITY BUSINESS ENTERPRISE (MBE) REQUIREMENTS

#### 1.0 PURPOSE

The purpose of the Procedures is to fulfill the intent of the law by setting goals for minority business enterprise participation in every contract that includes State funding through the Public School Construction Program. Local Educational Agencies (LEAs) shall attempt to achieve the result that a minimum of 29 percent of the total dollar value of all construction contracts is made directly or indirectly with certified minority business enterprises when State Public School Construction Program (PSCP) funds are utilized, with a minimum of 0 percent from certified African American-owned businesses, a minimum of 0 percent from certified Asian American-owned businesses, and the balance from any certified minority business enterprises. All general contractors, including certified MBE firms, when bidding as general or prime contractors are required to attempt to achieve the MBE subcontracting goals from certified MBE firms.

#### 2.0 EFFECTIVE DATE

These procedures have been adopted for use in Howard County and supersede previously utilized MBE procedures, and will take effect on or after September 18, 2008.

#### 3.0 DEFINITIONS

1. **Certification** means the determination that a legal entity is a minority business enterprise consistent with the intent of Subtitle 3 of the State Finance and Procurement Article.
2. **Certified Minority Business Enterprise** means a minority business that holds a certification issued by the Maryland State Department of Transportation (MDOT).
3. **Corporation**, as defined by MDOT, is an artificial person or legal entity created by or under the authority of the laws of any state of the United States, the District of Columbia or a territory or commonwealth of the United States and formed for the purpose of transacting business in the widest sense of that term, including not only trade and commerce, but also manufacturing, mining, banking, insurance, transportation and other forms of commercial or industry activity where the purpose of the organization is profit. For eligibility for certification, disadvantaged and/or minority individuals must own at least 51 percent of the voting stock and at least 51 percent of the aggregate of all classes of stock that have been issued by the corporation. (Note: stock held in trust is not considered as stock held by the disadvantaged businesspersons when computing the business person(s) ownership.)
4. **Managerial Control**, as defined by MDOT, means that a disadvantaged or minority owner(s) has the demonstrable ability to make independent and unilateral business decisions needed to guide the future and destiny of a business.

Control may be demonstrated in many ways. For a minority owner to demonstrate control, the following examples are put forth, but are not intended to be all inclusive:

- a. Articles of Incorporation, Corporate Bylaws, Partnership Agreements and other agreements shall be free of restrictive language which would dilute the minority owner's control thereby preventing the minority owner from making those decisions which affect the destiny of a business;
  - b. The minority owner shall be able to show clearly through production of documents the areas of the disadvantaged business owner's control, such as, but not limited to:
    - 1) Authority to sign payroll checks and letters of credit;
    - 2) Authority to negotiate and sign for insurance and/or bonds;
    - 3) Authority to negotiate for banking services, such as establishing lines of credit; and
    - 4) Authority to negotiate and sign for contracts.
  - c. Agreements for support services that do not lessen the minority owner's control of the company are permitted as long as the disadvantaged or minority business owner's authority to manage the company is not restricted or impaired.
5. **Minority Business Enterprise (MBE)** means any legal entity, except a joint venture, that is (a) organized to engage in commercial transactions, and (b) at least 51 percent owned and controlled by one or more individuals who are socially and economically disadvantaged including:
- African Americans;
  - American Indian/Native Americans;
  - Asians;
  - Hispanics;
  - Physically or mentally disabled individuals;
  - Women; or
  - A non-profit entity organized to promote the interests of physically or mentally disabled individuals.
6. **Minority Business Enterprise Liaison** means the employee of the school system designated to administer the Minority Business Enterprise Procedures for State funded public school construction projects.
7. **Operational Control**, as defined by MDOT, means that the disadvantaged or minority owner(s) must possess knowledge necessary to evaluate technical aspects of the business entity. The primary consideration in determining operational control and the extent to which the disadvantaged or minority owner(s) actually operates a business will rest upon the specialties of the industry of which the business is a part. The minority owner should have a working knowledge of the technical requirements needed to operate in his/her industry. Specifically, in the construction industry and especially among small (one to five person firms) contractors, it is reasonable to expect the disadvantaged or minority owner(s) to be knowledgeable of all aspects of the business. Accordingly, in order to clarify the level of operational involvement which a minority owner must have in a business for it to be considered eligible, the following examples are put forth, but are not intended to be all inclusive:
- a. The minority owner should have experience in the industry for which certification is being sought; and
  - b. The minority owner should demonstrate that basic decisions pertaining to the daily operations of the business are independently made. This does not necessarily preclude the disadvantaged or minority owner(s) from seeking paid or unpaid advice and assistance. It does mean that the minority owner currently



must possess the knowledge to weigh all advice given and to make an independent determination.

8. **Ownership**, as defined by MDOT, means that:
  - a. The minority owner(s) of the firm shall not be subject to any formal or informal restrictions, which limit the customary discretion of the owner(s). There shall be no restrictions through, for example, charter requirements, by-law provisions, partnership agreements, franchise or distributor agreements or any other agreements that prevent the minority owner(s), without the cooperation or vote of any non-minority, from making a business decision of the firm.
  - b. This means that the disadvantaged or minority persons, in order to acquire their ownership interests in the firm, have made real and substantial contributions of capital, expertise or other tangible personal assets derived from independently owned holdings without benefit of a transfer of assets, gift or inheritance from non-minority persons. Examples of insufficient contributions include a promise to contribute capital, a note payable to the firm or its owners who are not minority persons or the mere participation as an employee rather than as a manager. If the ownership interest held by a disadvantaged or minority person is subject to formal or informal restrictions, such as options, security interests, agreements, etc., held by a non-minority person or business entity, the options, security interests, agreements, etc., held by the non-minority person or business entity must not significantly impair the disadvantaged or minority person's ownership interest.
9. **Partnership** means an unincorporated association of two or more persons to carry on as co-owners of a business for profit. For a partnership to be deemed eligible for certification under the MDOT Program, the disadvantaged or minority person's interest must be at least 51 percent of the partnership capital.
10. **Socially and Economically Disadvantaged** means a citizen or lawfully admitted permanent resident of the United States who is socially disadvantaged and economically disadvantaged. The law establishes the level of personal net worth at \$1,500,000, above which an individual may not be found to be socially and economically disadvantaged.
11. **Sole Proprietorship**, as defined by MDOT, is a for-profit business owned and operated by a disadvantaged or minority person in his or her individual capacity. For a sole proprietorship to be deemed eligible for certification under the DBE/MBE Program, the disadvantaged or minority person must be the sole proprietor.

#### 4.0 MBE GOAL SETTING PROCEDURES

1. The MBE program requires that all race-neutral measures be considered before making use of race-based measures. Using a combination of race-neutral and race-based measures for each specific school construction project will help ensure that certified MBE firms are afforded the opportunity to submit bids and be utilized to the greatest extent possible.
2. Race-neutral measures include any action taken by the LEA to make it easier for all contractors, including MBEs, to compete successfully for public school construction project contracts.
3. Race-based measures include setting an overall MBE goal and MBE subgoals, if applicable, based upon race, gender, ethnicity, etc., for a specific project.

4. The overall MBE goal and the subgoals, if applicable, should be set for each specific project, considering but not limited to, the following factors:
  - a. The extent to which the work to be performed can reasonably be segmented to allow for MBEs to participate in the project;
  - b. A determination of the number of certified MBEs that potentially could perform the identified work;
  - c. The geographic location of the project in relationship to the identified certified MBEs;
  - d. Information obtained from other State departments/agencies related to establishing a MBE goal and/or subgoals for similar construction projects or work in the jurisdiction;
  - e. Information obtained from other State departments/agencies related to MBE participation in similar construction projects or work in the jurisdiction; and
  - f. Any other activities or information that may be identified as useful and productive.
  
5. The Superintendent or designee shall establish one or more procurement review groups (PRG). The PRG must include at a minimum the MBE liaison and the procurement officer (PO) or a representative from the procurement office. The PRG could also include a capital improvement project manager, the project architect, the cost estimator, the construction manager, and/or other individuals selected by the superintendent or designee.
  - a. The PRG should communicate and/or meet as needed to consider the MBE subcontracting goal and subgoals, if applicable, for individual projects or groups of projects.
  - b. The PRG should consider the factors cited in 4 above when establishing the MBE goal and subgoals, if applicable, for each project or segmented piece of a project that are reasonable and attainable.
  - c. The PRG must complete and submit a written analysis for each state funded school construction project with an estimated cost that is expected to exceed \$200,000.
    - i.. For state-funded projects that require review of construction documents (CD), the written analysis shall be submitted with the CD documents to the department of general services, and will be reviewed by DGS for submission, appropriate signatures, and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents.
    - ii. For state-funded projects that do not require review of construction documents, the written analysis shall be submitted to the public school construction program, and will be reviewed by the PSCP for submission and appropriate signatures.
    - iii. For locally funded projects that are anticipated to be requested for state approval of planning and funding, the written analysis shall be submitted with the CD documents to the Maryland state department of education, and will be reviewed by MSDE for submission, appropriate signatures, and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents. Submission of this document is a pre-condition for recommendation for state approval of planning and funding when submitted in an annual CIP.

- d. For projects estimated to cost between \$50,000 and \$200,000 the same analysis form is to be completed and submitted. This could be a responsibility of the PRG, but could be performed by others as well.
    - i. For state-funded projects that require review of construction documents (CD), the written analysis shall be submitted with the CD documents to the department of general services, and will be reviewed by DGS for submission, appropriate signatures, and correspondence between the goal and subgoals, if applicable, indicated in the analysis and those of the procurement documents.
    - ii. For state-funded projects that do not require review of construction documents, the written analysis shall be submitted to the public school construction program, and will be reviewed by the PSCP for submission and appropriate signatures.
  - e. If the project cost is estimated to exceed \$200,000 then a copy of the written analysis shall also be sent to GOMA at the same time that the written analysis is submitted to the DGS or the PSCP.
  - f. The PRG should consult with local counsel for the board of education as needed.
5. It is recognized that by utilizing the factors cited in 4 above, the MBE goal and/or subgoals, if applicable, for a specific project or portion thereof may be significantly higher than the overall goals of the program (29% overall, with 0% from African American-owned businesses and 0% from Asian American-owned businesses). It is also recognized and possible that there will be MBE goals set that are lower than those stated above or even that no MBE goal and/or subgoals will be set for a specific project or the segmented piece of the project.
  6. Assistance in reviewing the factors cited in 4 above and setting a goal and/or subgoals, if applicable, for specific projects or a segmented piece of a project can be obtained by contacting the Public School Construction Program and/or the Governor's Office of Minority Affairs.

## **5.0 IMPLEMENTING PROCEDURES - Over \$50,000**

For construction projects estimated to cost in excess of \$50,000, the following procedures will be utilized:

1. All advertisements, solicitations, and solicitation documents shall include the following statements:
  - a. "Certified Minority Business Enterprises are encouraged to respond to this solicitation notice."
  - b. "The contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the specific overall MBE goal of \_\_\_\_ percent established for this project. All prime contractors, including certified MBE firms, when submitting bids or proposals as general or prime contractors, are required to attempt to achieve this goal from certified MBE firms."
  - c. If subgoals have been established for this project then one of the following should be included:
    - 1) "The subgoals established for this project are \_\_\_\_ percent from African American-owned businesses and \_\_\_\_ percent from Asian American-owned businesses."

- 2) "The subgoal established for this project is \_\_\_\_ percent from African American-owned businesses."
  - 3) "The subgoal established for this project is \_\_\_\_ percent from Asian American-owned businesses."
- d. "The bidder or offeror is required to submit with its bid or proposal a completed Attachment A - Certified MBE Utilization and Fair Solicitation Affidavit and Attachment B - MBE Participation Schedule, as described in the solicitation documents.
  - e. If there is no overall MBE goal or MBE subgoals established for the project, then only 1.A. above is to be included.
2. Other Advertisement and Outreach Requirements
- a. To encourage greater MBE participation the staff of the school system should send out notices of potential projects to MBEs or solicit bids or proposals directly from minority business enterprise contractors that are certified.
  - b. A copy of the solicitation notice, preferably electronically, shall be sent to the Governor's Office of Minority Affairs at the same time the advertisement for the solicitation is released.
  - c. Upon request for a specific project, the school system shall provide one set of drawings and specifications (and addenda when issued) to minority business enterprise associations recognized by the Governor's Office of Minority Affairs. They will be available free of charge to be picked up at a location designated by the LEA. A review of the bid or proposal activity by an association's members may be initiated to justify continuation of this service.
  - d. When a pre-bid or pre-proposal conference is held, the MBE Liaison or designated representative shall explain the MBE goal and subgoals, if applicable; the MBE provisions of the solicitation; the documentation required at the time of submission; its relationship to the responsiveness of the bidder or offeror; how to complete the required attachments, particularly A, B, and C; and additional information and supporting documentation that may be required after the bid or proposal opening. All contractors who attend the pre-bid or pre-proposal conference should receive a list or information explaining how to obtain a listing of certified MBE firms who could perform the work or have expressed an interest in performing the school construction work required for the specific project in the jurisdiction.
  - e. The names of prime contractors obtaining drawings and specifications will be shared with certified MBEs and MBE associations, upon request.
  - f. The MBE liaison, in conjunction with the procurement officer or project staff, should respond to all applicable questions and concerns relating to the project's MBE requirements completely and in a timely fashion to ensure that all potential contractors and subcontractors can compete effectively.
3. All Solicitation Documents Shall Include the Following:
- a. "Certified Minority Business Enterprises are encouraged to respond to this solicitation notice".
  - b. "The contractor or supplier who provides materials, supplies, equipment and/or services for this construction project shall attempt to achieve the result that a minimum of \_\_ percent of the total contract value is with certified Minority Business Enterprises, with a minimum of \_\_ percent from certified African American-owned businesses, a minimum of \_\_ percent from certified Asian American-owned businesses, and the balance from any certified Minority Business Enterprises. All contractors, including certified MBE firms, when submitting bids or proposals as prime contractors, are required to attempt to

achieve the MBE goal and subgoals, if applicable, from certified MBEs". Note: see 6.1.C. above for variations that may be required.

- c. Each bid or offer submitted, including a submittal from a certified MBE in response to this solicitation, shall be accompanied by a completed Attachment A - Certified MBE Utilization and Fair Solicitation Affidavit and a completed Attachment B - MBE Participation Schedule. These two attachments must be accurate and consistent with each other.
  - 1) Attachment A and Attachment B shall be submitted with the sealed bid price or proposal at a place, date, and time specified in the solicitation document.
  - 2) As an alternative, and at the discretion of the school system, Attachment A could be submitted with the sealed bid price or proposal at a place, date, and time specified in the solicitation document. The sealed bids or proposals received by the time specified could be held, unopened for a maximum of 30 minutes. Within that time (30 minutes) each bidder or offeror must submit Attachment B, in a separate sealed envelope. The sealed price envelopes from each bidder or offeror who submits both the sealed bid or proposal and the envelope with Attachment B will then be opened and reviewed and recorded as a viable submission. Any contractor that fails to submit the second envelope, with Attachment B, prior to the specified time allowed (30 minutes) after the submittal of the sealed bid or proposal will be deemed non-responsive and the sealed bid or proposal will not be opened or considered.
- d. The submittal of a completed and signed Attachment A - Certified MBE Utilization and Fair Solicitation Affidavit and a completed and signed Attachment B - MBE Participation Schedule indicates the bidder's or offeror's recognition and commitment to attempt to achieve the MBE goal and/or MBE subgoals, if applicable, for the specific project.
  - 1) The bidder or offeror recognizes that their efforts made to initiate contact, to solicit, and to include MBE firms in this project will be reviewed carefully and evaluated based upon the actions taken by them prior to and up to 10 days before the bid or proposal opening. Follow-up actions taken by the bidder or offeror within the 10 days prior to the bid opening will also be considered.
  - 2) Based upon this review and evaluation it will be determined, by the MBE liaison, procurement officer, or a designated person, if a good faith effort was made by the apparent low bidder or apparent successful offeror.
  - 3) In accordance with the Governor's Office of Minority Affairs, a MBE Prime contractor may self-perform up to 50% of the overall MBE contract goal and up to 100% of any one MBE contract subgoal, provided that the certified MBE prime contractor is properly identified on the MBE participation schedule and the firm is NAICS code-certified to do the work.
- e. The bidder or offeror must check one of the three boxes on Attachment A, which relates to the level of MBE participation achieved for the project. The bidder's or offeror's signature indicates that in the event that they did not meet the MBE goal or subgoals, if applicable, that:
  - 1) They are therefore requesting a waiver, and
  - 2) Documentation of their good faith efforts will be provided to the school system staff within 10 days of being notified that they are the apparent low bidder or apparent successful offeror.
- f. The bidder or offeror must submit Attachment B (as and when described above), which lists and provides information related to each certified MBE firm that the bidder or offeror will utilize on this project. A completed and accurate Attachment

B is required. All of the work specified to be performed by each MBE firm, the contact information, MDOT certification number, minority code, the dollar values, and percentages must be correct.

- g. Attachment B should be completed and submitted with all calculations utilizing the base bid or offer only. A revised Attachment B should be submitted by the successful bidder or offeror once a determination is made as to the acceptance and/or rejection of any alternates.
- h. If a request for a waiver has been made, the appropriate box on Attachment A has been checked and the attachment signed, then the LEA should obtain and review the apparent low bidder's or successful offeror's supporting documentation of the good faith efforts to justify the granting of the waiver, prior to submitting the contract award for approval to the board of education.
- i. The following documentation shall be considered as part of the contract, and shall be furnished by the apparent low bidder or successful offeror to the MBE Liaison or designated person, within ten (10) working days from notification that the firm is the apparent low bidder or successful offeror:

- 1) A completed Attachment D - Minority Business Enterprise Subcontractor Project Participation Statement shall be completed and signed by the prime contractor and each MBE firm listed on Attachment B - MBE Participation Schedule and Attachment C - Outreach Efforts Compliance Statement shall be signed and completed by the bidder or offeror.
- 2) Notification for purposes of this procedure means the earliest of the following methods of communication: orally in person, orally by telephone, orally by a telephone message, a faxed communication, a letter by date received or an electronic communication.
- 3) The ten (10) working days do not include the day the notification is received, weekends or holidays (State or Federal), but the material submitted must be received by the close of business on the tenth day.
- 4) The requirement to submit the above-listed documentation within the time frame specified will be considered by the IAC in its review of the request for contract award for the project. Failure to submit the required documentation within the time frame specified may result in a delay of the approval of the award of the contract, or the materials being returned without the approval of the award of the contract.

#### 4. Waiver Procedures

- a. If the apparent low bidder or successful offeror has determined that they are unable to meet the overall MBE goal or subgoals, if applicable, for the project at the time of submission of a bid or offer, they must check either of the two boxes on Attachment A. The signature recognizes and acknowledges that a request for a waiver is being made. The apparent low bidder or successful offeror will therefore be required to submit information and substantiating documentation that will be reviewed to justify the granting of a waiver.
- b. If the apparent low bidder or successful offeror is unable to achieve the overall MBE contract goal and/or the MBE subgoals, if applicable, from certified African American-owned businesses and/or from certified Asian American-owned businesses, the apparent low bidder or successful offeror shall submit, within 10 working days from notification that the firm is the apparent low bidder or successful offeror, a completed Attachment C - Outreach Efforts Compliance Statement, Attachment E - Minority Subcontractors Unavailability Certificate, and Attachment F - MBE Waiver Documentation which shall include the following:

- 1) A detailed statement of the efforts made by the bidder or offeror to identify and select portions of the work proposed to be performed by subcontractors in order to increase the likelihood of achieving the stated goal;
  - 2) A detailed statement of the efforts made by the bidder or offeror prior to and up to at least ten (10) days before the bid or proposal opening to solicit minority business enterprises through written notices that describe the categories of work for which subcontracting is being solicited, the type of work to be performed and specific instructions on how to submit a bid or proposal;
  - 3) Follow-up actions taken by the bidder or offeror within the 10 days prior to the bid or proposal opening will also be considered.
  - 4) A detailed statement of the bidder's or offeror's efforts to make personal contact with MBE firms identified for item (2) above;
  - 5) A record of the name, address, telephone number and dates contacted for each MBE identified under items (2) and (3) above;
  - 6) A description of the information provided to MBEs regarding the drawings, specifications and the anticipated time schedule for portions of the work to be performed;
  - 7) Information on activities to assist minority business enterprises to fulfill bonding requirements or to obtain a waiver of these requirements;
  - 8) Information on activities to publicize contracting opportunities to minority business enterprises, attendance at pre-bid or pre-proposal meetings or other meetings scheduled by the MBE Liaison or designated representative; and
  - 9) As to each MBE that placed a subcontract quotation or offer which the apparent low bidder or successful offeror considers not to be acceptable, a detailed statement of reasons for this conclusion.
- c. In addition to any waiver documentation the apparent low bidder or successful offeror shall submit one completed Attachment D - Minority Business Enterprise Subcontractor Project Participation statement for each MBE firm that will participate in the project consistent with the information previously provided at the time of the submission of Attachment B or the revised Attachment B.
- d. A waiver of an MBE contract goal or subgoal, if applicable, may be granted by the school system only upon receipt of Attachment C - Outreach Efforts Compliance Statement, Attachment E - Minority Subcontractors Unavailability Certificate, and Attachment F - MBE Waiver Documentation as described above in items 1) through 9)
- 1) The MBE Liaison will review and accept or reject the minority business enterprise material that is submitted, and could obtain legal advice or assistance from their attorney.
  - 2) The MBE waiver request may not be considered unless all of the documentation specified above has been submitted in a timely fashion by the apparent low bidder or successful offerer.
  - 3) Assistance in the review of a request for a waiver (the documentation and justifications) may be requested from the Public School Construction Program and/or the Governor's Office of Minority Affairs.
  - 4) If a determination is made that the apparent low bidder or successful offeror did make a good faith effort, based upon a review of the documentation submitted, then the waiver must be granted. The award of contract shall then be made. The material and information submitted, including the LEA's review and analysis notes and conclusion shall be retained in the project file.
  - 5) If a determination is made that the apparent low bidder or successful offeror did not make a good faith effort, based upon a review of the documentation submitted, then the waiver should not be granted. The material and

information submitted, including the LEA's review and analysis notes and conclusion, shall be retained in the project file. The award of contract shall then be made to the next lowest bidder or offeror, who meets the contractual requirements, including the MBE requirements.

- 6) When a waiver is granted, a copy of Attachment F - MBE Waiver Documentation, accepted and signed by a school system representative and with the reasons for the determination, shall be forwarded to the Governor's Office of Minority Affairs and the Public School Construction Program within ten (10) days after approval of the contract award by the board of education. Failure to submit the required documentation within the time frame specified may result in delayed approval of the award of contract by the IAC.

5. All Contracts Shall Include The Following:

- a. "The contractor shall perform the contract in accordance with the representations made in Attachment A - Certified Minority Business Enterprise Utilization and Fair Solicitation Affidavit and Attachment B - MBE Participation Schedule, submitted as part of the bid or proposal".
- b. "Failure to perform the contract as specified and presented in the bid or proposal submission without prior written consent of the owner shall constitute a violation of a material term of the contract".
  - 1) The contractor shall structure his/her operations for the performance of the contract to attempt to achieve the MBE goals as stated in the solicitation document.
  - 2) The contractor agrees to use his/her best efforts to carry out these requirements consistent with the efficient and effective performance of the contract.
  - 3) The contractor must ensure that all certified MBEs shall have the maximum practical opportunity to compete for additional subcontract work under the contract, even after the award of the contract.
  - 4) The contractor shall submit monthly to the MBE Liaison or the school system's designated representative a report listing any unpaid invoices, over 30 days old, received from any certified MBE subcontractor, the amount of each invoice and the reason payment has not been made.
  - 5) The contractor shall included in its agreements with its certified MBE subcontractors, a requirement that those subcontractors submit monthly to the MBE Liaison or appropriate representative a report that identifies the prime contract and lists all payments received from the contractor in the preceding 30 days, as well as any outstanding invoices, and the amount of those invoices.
  - 6) The contractor shall cooperate in any reviews of the contractor's procedures and practices with respect to minority business enterprises, which the MBE Liaison, the Public School Construction Program, and/or the Governor's Office of Minority Affairs may, from time to time, conduct.
  - 7) The contractor shall maintain such records as are necessary to confirm compliance with its MBE participation obligations. These records must indicate the identity of certified minority and non-minority subcontractors employed on the contract, the type of work performed by each, and the actual dollar value of work performed. Subcontract agreements documenting the work performed by all MBE participants must be retained by the contractor and furnished to the MBE Liaison and or appropriate representative on request.
  - 8) All records concerning MBE participation must be retained by the contractor for a period of five years after final completion of the contract, and will be



available for inspection by the MBE Liaison, representatives from the Public School Construction Program and/or other designated official entities.

- 9) At the option of the MBE Liaison or appropriate agency representative, upon completion of the contract and before final payment and/or release of retainage, the contractor shall submit a final report in affidavit form and under penalty of perjury, of all payments made to, or withheld from MBE subcontractors.
- 10) If at any time after submission of a bid or proposal and before execution of a contract, the apparent successful bidder or offeror determines that a certified MBE listed on Attachment B - MBE Participation Schedule has become or will become unavailable, then the apparent successful bidder or offeror shall immediately notify the procurement officer and provide such officer with a reason(s) why the change has occurred. Any desired change in Attachment B - MBE Participation Schedule shall be approved in advance by the procurement officer and shall indicate the contractor's efforts to substitute another certified MBE subcontractor to perform the work. Desired changes occurring after the date of contract execution may occur only upon written approval by the LEA.
- 11) A business that presents itself as a minority business may participate in a project but the contract value may not be counted toward the MBE goal or subgoals, if applicable, until the business is certified by MDOT. If it is not certified at the time of contract award it may not be counted toward the goal or subgoals, if applicable, at that time. Only the funds paid after MDOT certification can be counted toward meeting the MBE goal or subgoals, if applicable. If a certified MBE fails to meet the standards specified in State Finance and Procurement Article.14-301, Annotated Code of Maryland, the payments made to the MBE can be recorded and counted under a contract entered into when the MBE was eligible and certified. Ineligibility of an MBE to participate in the MBE program may not be the sole cause of the termination of the MBE contractual relationship for the remainder of the term of the contract.
- 12) Contractors are encouraged to seek additional MBE participation in their contracts during the life of the project. Any additional MBE participation from certified MBEs should be reported to the MBE liaison and should be included in subsequent monthly requisitions for payment.
- 13) The contractor shall complete the Standard Monthly Contractor's Requisition for Payment (IAC/PSCP Form 306.4), specifically page 3 of 16, *Minority Business Enterprise Participation*, with each requisition submitted for payment. This submittal should accurately reflect the payments to be made that month to MBEs, and the cumulative total for the period specified. Any and all MBE firms that are identified on Attachment B – MBE Participation Schedule should be included on page 3 of the first and all subsequent requisitions for payment. Any MBEs identified during the life of the project should be added as soon as the contractor engages them.
- 14) At the completion of the project the contractor shall prepare a written summary of the final certified MBE participation in the contract as compared to the proposed participation at the time of contract award. This should include the name of each certified MBE, the amount that was anticipated to be paid at the time of contract award, the amount actually paid, and an explanation of any differences that have occurred. Special attention should be given to any situations where the final payments to any MBE was below the level of commitment at the time of contract award.

## 6. Projects Utilizing a Construction Manager Delivery Method

This section of the procedure has been prepared based upon the utilization of Construction Manager Agency method of delivery. If another alternative method of project delivery is being considered, then these procedures would need to be adapted in consultation with the PSCP before proceeding.

- a. For projects that are being designed and solicited utilizing a Construction Manager Agency delivery method with multiple prime contracts, the school system can structure its procedures to attain the overall MBE goal and subgoals, if applicable, for the project as presented below:
- b. The MBE liaison and other school system staff should work with the project's construction manager, cost estimator, and architect, along with any other individuals who could provide assistance, to determine the overall MBE utilization strategy for the work required, appropriate bid packages, and an appropriate overall MBE goal and subgoals, if applicable, for each specific bid or proposal package.
- c. The overall MBE goal and subgoals, if applicable, for the project shall represent the aggregate of the individual goals and subgoals, if applicable, set for each bid or proposal package.
- d. In setting the specific goals and subgoals, if applicable, for each solicitation package consideration should be given to the potential for MBE participation to the maximum extent possible. The information and procedures provided in section 4.0 MBE Goal Setting Procedures should be consulted and followed for these types of projects.
- e. Prior to submitting the construction documents for State review and authorization to solicit bids or proposals, the school system's representative will prepare a complete list of the individual solicitation packages and indicate the MBE goal and subgoals, if applicable, for each solicitation package. This would include the overall MBE goal and subgoals, if applicable, established in the solicitation documents, the estimated cost for each solicitation package, and the estimated MBE dollar amounts for each solicitation package. A copy of this list should be submitted with the construction documents. The list should be retained as a record by the school system for comparison to the actual contracts awarded with MBE participation, and the final actual MBE participation at the completion of the project.
- f. Contractors submitting bids or proposals for solicitation packages that do not include a MBE goal and subgoals, if applicable, would not be required to submit any of the MBE attachments that are otherwise required nor would they be required to indicate that they are requesting a waiver. The school system representative would, however, request information from the contractor at the completion of the project to determine if any certified MBE firms had participated in the contract.
- g. All other submittals of MBE materials and reporting requirements are applicable for the project, including the submittal of attachments a and b as described above in section 6.0. this includes the documentation for a request for a waiver, if applicable and appropriate.

## **6.0 RECORDS AND REPORTS**

1. The MBE Liaison shall maintain such records as are necessary to confirm compliance with its Minority Business Enterprise Procedures and activities. The records shall be maintained until the project is audited by the Public School Construction Program. These records shall include by project:
  - a. The contractor report submitted at the completion of the project;
  - b. The identity of the minority contractors employed on the project;
  - c. The type of work performed;

- d. The actual dollar value of the work, services, supplies or equipment; and
  - e. The MBE percentage of the total contract.
2. The MBE Liaison will maintain a record of all waivers approved for each project or solicitation package where the prime contractor was unable to achieve the established overall goal or subgoals, if applicable. The MBE Liaison will, however, report to the PSCP all MBE participation by MDOT certified firms who are prime contractors, subcontractors, suppliers, or otherwise making an economically viable contribution to each project. This information shall be reported to PSCP within ten (10) days after approval of the award of the contract by the board of education.
  3. The LEA shall submit the “Certified Minority Business Enterprise Participation Standard Monthly Contractor’s Requisition for Payment” (IAC/PSCP Form 306.4 page 3 of 16, located in the Administrative Procedures Guide), which is Attachment G in this procedure, to the PSCP Director of Fiscal Services as part of the regular monthly request for payment for the project.
  4. The LEA shall submit the “Close-Out Cost Summary” (IAC/PSCP Form 306.6 located in the Administrative Procedures Guide), which is Attachment H of this procedure, along with the “Certified Minority Business Enterprise Participation Standard Monthly Contractor’s Requisition for Payment” (IAC/PSCP Form 306.4) to the PSCP Director of Fiscal Services within 180 days of completion of the project.
  5. Each fiscal year end, PSCP Fiscal Services will create a report “Payments Made To Contractors during The Fiscal Year” and maintain such records as are necessary to confirm compliance with its minority business enterprise procedures and activities.
  6. Each fiscal year end, PSCP Fiscal Services will create a report “Projects Completed During the Fiscal Year” and maintain such records as are necessary to confirm compliance with its Minority Business Enterprise Procedures and activities. This report will compare the overall MBE goal and subgoals, if applicable, for each specific project with the MBE participation anticipated at the time of contract award and the actual MBE participation at the completion of the project.

**7.0 MONITORING**

1. The LEA’s procurement personnel or project staff shall verify that the certified MBE’s listed in the MBE participation schedule are actually performing the work.
2. The LEA’s procurement personnel shall ensure that MBE subcontractors are receiving compensation as set forth in the MBE participation schedule by ensuring that the contractor submits monthly reports, listing any unpaid invoices over 30 days old received from any certified MBE subcontractor, the amount of each invoice, and the reason payment has not been made.
3. The MBE Liaison and/or the Public School Construction Program will conduct reviews as deemed necessary to confirm compliance with the minority business enterprise participation requirements.
4. The MBE Liaison will maintain appropriate records, and shall assist the Public School Construction Program in on-site or post-audit reviews upon request.
5. Auditors from the Public School Construction Program will have access to and the ability to audit MBE participation for specific projects, information retained by the LEA, and/or submitted to the IAC in reports/forms filed by the LEA as referenced above.

## 8.0 Liquidated Damages – Minority Business Enterprise Program

This contract requires the contractor to make good faith efforts to comply with the Minority Business Enterprise (“MBE”) Program and contract provisions. The State and the Contractor acknowledge and agree that the State will incur damages, including but not limited to loss of goodwill, detrimental impact on economic development, and diversion of internal staff resources, if the Contractor does not make good faith efforts to comply with the requirements of the MBE Program and MBE contract provisions. The parties further acknowledge and agree that the damages the State might reasonably be anticipated to accrue as a result of such lack of compliance are difficult to ascertain with precision.

Therefore, upon a determination by the State that the Contractor failed to make good faith efforts to comply with one or more of the specified MBE Program requirements or contract provisions, the Contractor agrees to pay liquidated damages to the State at the rates set forth below. The Contractor expressly agrees that the State may withhold payment on any invoices as a set-off against liquidated damages owed. The Contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss the State is anticipated to incur as a result of such violation.

- a. Failure to submit each monthly payment report in full compliance with COMAR 21.11.03.13B (3): \$225.00 per day until the monthly report is submitted as required.
- b. Failure to include in its agreements with MBE subcontractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): \$ 100.00 per MBE subcontractor.
- c. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule for that specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.
- d. Failure to meet the Contractor’s total MBE participation goal and sub goal commitments: the difference between the dollar value of the total MBE participation commitment on the MBE participation schedule and the MBE participation actually achieved.
- e. Failure to promptly pay all undisputed amounts to an MBE subcontractor in full compliance with the prompt payment provisions of this contract: \$225.00 per day until the undisputed amount due to the MBE subcontractor is paid.

Notwithstanding the use of liquidated damages, the State reserves the right to terminate the contract and exercise all other rights and remedies provided in the contract by law.

PROJECT: \_\_\_\_\_

PSC#: \_\_\_\_\_

Attachment A (page 1 of 2)

**CERTIFIED MINORITY BUSINESS ENTERPRISE  
UTILIZATION AND FAIR SOLICITATION AFFIDAVIT**

**NOTE: You must include this document with your bid or offer. If you do not submit the form with your bid or offer, the procurement officer shall deem your bid non-responsive or your offer not reasonably susceptible of being selected for award.**

\* \* \* \* \*

**Part I.**

I acknowledge the:

- Overall certified MBE subcontract participation goal of \_\_\_\_ %.
- The subgoals, if applicable, of:
  - \_\_\_\_ % for certified African American-owned businesses and
  - \_\_\_\_ % for certified Asian American-owned businesses.

I have made a good-faith effort to achieve this goal. If awarded the contract, I will continue to attempt to increase MBE participation during the project.

**Part II.**

Check ONE Box

**NOTE: FAILURE TO CHECK ONE OF BOXES 1, 2, or 3 BELOW WILL RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

**NOTE: INCONSISTENCY BETWEEN THE ASSERTIONS ON THIS FORM AND THE INFORMATION PROVIDED ON THE *MBE PARTICIPATION SCHEDULE* (ATTACHMENT B) MAY RENDER A BID NON-RESPONSIVE OR AN OFFER NOT REASONABLY SUSCEPTIBLE OF BEING SELECTED FOR AWARD**

1  I have met the overall MBE goal and MBE subgoals for this project. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details how I will reach that goal.

**or**

2  After having made a good-faith effort to achieve the overall MBE goal and MBE subgoals for this project, I can achieve partial success only. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B], which details the MBE participation I have achieved.

I request a partial waiver as follows:

- Waiver of overall MBE subcontract participation goal: \_\_\_\_ %
- Waiver of MBE subcontract participation subgoals, if applicable:
  - \_\_\_\_ % for certified African American-owned businesses and
  - \_\_\_\_ % for certified Asian American-owned businesses.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

or

- 3  After having made a good faith effort to achieve the overall MBE goal and MBE subgoals for this project, I am unable to achieve any portion of the goal or subgoals. I submit with this Affidavit [Attachment A] the *MBE Participation Schedule* [Attachment B].

I request a full waiver.

Within 10 days of being informed that I am the apparent awardee, I will submit *MBE Waiver Documentation* [Attachment F] (with supporting documentation).

### Part III.

I understand that if I am the apparent awardee or conditional awardee, I must submit **within 10 working days** after receiving notice of the potential award or within 10 days after the date of conditional award – whichever is earlier – the:

- *Outreach Efforts Compliance Statement* (Attachment C)
- *Subcontractor Project Participation Statement* (Attachment D)
- *Minority Subcontractors Unavailability Certificate* (Attachment E) (if applicable)
- Any other documentation the Procurement Officer requires to ascertain my responsibility in connection with the MBE participation goal and subgoals

I acknowledge that if I fail to timely return complete documents, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has been awarded, the award is voidable.

I acknowledge that the MBE subcontractors/suppliers listed in the *MBE Participation Schedule* and any additional MBE subcontractor/suppliers identified in the *Subcontractor Project Participation Statement* will be used to accomplish the percentage of MBE participation that I intend to achieve.

In the solicitation of subcontract quotations or offers, MBE subcontractors were provided the same information and amount of time to respond as were non-MBE subcontractors.

The solicitation process was conducted in such a manner so as to not place MBE subcontractors at a competitive disadvantage to non-MBE subcontractors.

**I solemnly affirm under the penalties of perjury that this Affidavit is true to the best of my knowledge, information, and belief.**

\_\_\_\_\_  
Bidder/Offeror Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address (continued)

\_\_\_\_\_  
Affiant Signature

\_\_\_\_\_  
Printed Name & Title

\_\_\_\_\_  
Date

**ATTACHMENT B  
MBE PARTICIPATION SCHEDULE**

**ORIGINAL**

This document must be included with the bid or offer. If the bidder or offeror fails to submit this form with the bid or offer as required, the procurement officer shall deem the bid non-responsive or shall determine that the offer is not reasonably susceptible of being selected for award.

1. Prime Contractor's Name	2. Prime Contractor's Address/Telephone Number
3. Project/School Name	4. Project/School Location
5. LEA Name:  PSC Number:	6. Base Bid Amount \$ _____ Acceptance Alternates \$ _____  Total \$ _____

7a. Minority Firm Name: \_\_\_\_\_  
 Minority Firm Address: \_\_\_\_\_ Telephone Number: \_\_\_\_\_  
 MDOT Firm Certification Number: \_\_\_\_\_ NAICS Code: \_\_\_\_\_  
 African American    Asian American    Native American    Women    Hispanic    Disabled

Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal   OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____

7b. Minority Firm Name: \_\_\_\_\_  
 Minority Firm Address: \_\_\_\_\_ Telephone Number: \_\_\_\_\_  
 MDOT Firm Certification Number: \_\_\_\_\_ NAICS Code: \_\_\_\_\_  
 African American    Asian American    Native American    Women    Hispanic    Disabled

Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal   OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____

7c. Minority Firm Name: \_\_\_\_\_  
 Minority Firm Address: \_\_\_\_\_ Telephone Number: \_\_\_\_\_  
 MDOT Firm Certification Number: \_\_\_\_\_ NAICS Code: \_\_\_\_\_  
 African American    Asian American    Native American    Women    Hispanic    Disabled

Subcontractor Firm (Select One)	Allowable Percentage	Percentage of Total Contract	Subcontractor Dollar Amount	Participation Amount
MDOT Certified Firm	100%		\$ _____	\$ _____
MDOT Certified Prime Contractor	50% of established goal   OR		\$ _____	\$ _____
	100% of one subgroup contract subgoal			
MDOT Certified Supplier, Wholesaler and Regular Dealer	60%		\$ _____	\$ _____

8. MBE Total Amount	9. Total MBE Percent of Entire Contract
---------------------	---

10. Form Prepared by: Name: _____ Title: _____ Date: _____	11. Reviewed and Accepted by Board of Edu. MBE Liaison Name: _____ Title: _____ Date: _____
---	--

Total MBE Participation: \$ \_\_\_\_\_ %  
 Total African-American Participation: \$ \_\_\_\_\_ %  
 Total Asian-American MBE Participation: \$ \_\_\_\_\_ %  
 Total Other Participation: \$ \_\_\_\_\_ %

## Outreach Efforts Compliance Statement

**\*\*Complete and submit this form within 10 business days of notification of apparent award  
\*\***

In conjunction with the bid or offer submitted in response to the solicitation # \_\_\_\_\_  
for Howard County Public Schools for the project, PSC # \_\_\_\_\_, I affirm the following:

1. Bidder/Offeror identified opportunities to subcontract in these specific work categories  
(extend list as needed):

- |          |          |
|----------|----------|
| a. _____ | d. _____ |
| b. _____ | e. _____ |
| c. _____ | f. _____ |

2. Attached to this form are copies of written solicitations (with bidding instructions) used  
to solicit certified MBEs for these subcontract opportunities.

3. Bidder/Offeror made the following attempts to contact personally the solicited certified  
MBEs (extend list as needed):

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_

4. Select ONE of the following:

- a.  This contract does not involve bonding requirements.  
**OR**  
b.  Bidder/Offeror assisted certified MBEs to fulfill or seek waiver of bonding  
requirements (*describe efforts*).

5. Select ONE of the following:

- a.  Bidder/Offeror did/did not attend the pre-bid/proposal conference.  
**OR**  
b.  No pre-bid/proposal conference was held.

\_\_\_\_\_  
Bidder/Offeror Printed Name

By: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Attachment D

MINORITY BUSINESS ENTERPRISES SUBCONTRACTOR PROJECT PARTICIPATION STATEMENT

PROJECT/ SCHOOL NAME:
PROJECT/ SCHOOL LOCATION:
LEA:
NAME OF PRIME CONTRACTOR:
NAME OF MBE SUBCONTRACTOR:
MDOT Certification Number
NAICS Code

- 1. Work/Services to be performed by MBE Subcontractor:
2. Subcontract Amount: \$ Participation Amount \$
3. Bonds - Amount and type required of Subcontractor if any:
4. MBE Anticipated or Actual Commencement Date: Completion Date:
5. This MBE subcontract represents the following percentage of the total contract cost:
6. This is an African American Firm: Yes No
7. This is an Asian American Firm: Yes No
8. This is a Native American, Hispanic or Disabled Firm: Yes No

(Circle One)

\*\*\*\*\*

The undersigned subcontractor and prime contractor will enter into a contract for the work/service indicated above upon the prime contractor's execution of a contract for the above referenced project with the Board of Education. The undersigned subcontractor is a MDOT certified Minority Business Enterprise. The terms and conditions stated above are consistent with our agreements.

Signature of Subcontractor:

Date:

The term and conditions stated above are consistent with our agreements.

Signature of Prime Contractor:

Date:

**MINORITY SUBCONTRACTOR UNAVAILABILITY CERTIFICATE**

1. It is hereby certified that the firm of \_\_\_\_\_  
(Name of Minority firm)

located at \_\_\_\_\_  
(Number) (Street)  
\_\_\_\_\_  
(City) (State) (Zip)

was offered an opportunity to bid on the \_\_\_\_\_ school project  
in \_\_\_\_\_ County by \_\_\_\_\_  
(Name of Prime Contractor's Firm)

\*\*\*\*\*

2. \_\_\_\_\_ (Minority Firm), is either unavailable for the  
work/service or unable to prepare a bid for this project for the following reason(s):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**Signature of Minority Firm's MBE Representative**                      **Title**                      **Date**

\_\_\_\_\_  
MDOT Certification #    Telephone #

3. To be completed by the prime contractor if Section 2 of this form is not completed by the minority firm.

To the best of my knowledge and belief, said Certified Minority Business Enterprise is either unavailable for the work/service for this project, is unable to prepare a bid, or did not respond to a request for a price proposal and has not completed the above portion of this submittal.

\_\_\_\_\_  
Signature of Prime Contractor    Title    Date

**Attachment F**

**MBE WAIVER DOCUMENTATION**

**Project Name:** \_\_\_\_\_ **PSC No.** \_\_\_\_\_

**Base Contract Amount** \$ \_\_\_\_\_

**Plus Accepted Alternates** \$ \_\_\_\_\_

**Equals Total Contract Amount** \$ \_\_\_\_\_

I have previously requested that a waiver be granted to the overall MBE goal for this project of \_\_\_\_ percent, with a minimum of \_\_\_\_ percent from certified African American-owned businesses, a minimum of \_\_\_\_ percent from certified Asian American-owned businesses, and the balance from all certified minority business enterprises, if applicable. This would include the total dollar value of all materials, supplies, equipment, and services, including construction services directly or indirectly, from Minority Business Enterprises (MBE) which are currently certified by the Maryland Department of Transportation (MDOT).

**I** \_\_\_\_\_, hereby certify that my position is  
(Name of Company Representative)

\_\_\_\_\_, and I am the duly authorized representative of  
(Position Title)

\_\_\_\_\_.  
(Company Name)

I further certify that I have submitted a *Schedule for Participation of Certified Minority Business Enterprises* which reflects the percentage and dollar value of certified Minority Business Enterprise participation which my company expects to achieve for this contract. Therefore, the request for the waiver is as follows:

**Summary MBE Participation Schedule from Attachment B**

Minority Group	MBE GOAL		Actual MBE Participation		Request For Waiver	
	Dollar Value of Total Contract*	Percent of Total Contract	Dollar Value	Percent of Total Contract	Dollar Value	Percent of Total Contract
a. Sub Goal African American						
b. Sub Goal Asian American						
c. Other * in Sub Goal group a/b above						
<b>TOTALS</b>						

\* with accepted/rejected alternates

To support this request for a waiver, I include the following information as attachments which I certify to be true to the best of my knowledge.

1. A detailed statement of the efforts made by the contractor to identify and select portions of the work proposed to be performed by subcontractors in order to increase the likelihood of achieving the stated goal;
2. A detailed statement of the efforts made by the contractor prior to and up to 10 days before the bid opening to solicit minority business enterprises through written notices that describe the categories of work for which subcontracting is being solicited, the type of work to be performed, and specific instructions on how to submit a bid;
3. A detailed statement of the contractor's efforts to make personal contact with MBE firms identified for Item 2. above;
4. A record of the name, address, telephone number, and dates contacted for each MBE identified under items 2. and 3. above;
5. A description of the information provided to MBE's regarding the plans, specifications and the anticipated time schedule for portions of the work to be performed;
6. Information on activities to assist minority business enterprises to fulfill bonding requirements, or to obtain a waiver of these requirements;
7. Information on activities to publicize contracting opportunities to minority business enterprises, attendance at pre-bid meetings, or other meetings scheduled by the MBE Liaison or designated representative;
8. As to each MBE that placed a subcontract quotation or offer which the apparent low bidder or successful offeror considers not to be acceptable, a detailed statement of reasons for this conclusion; and
9. A list of minority subcontractors found to be unavailable. This shall be accompanied by a Minority Subcontractor Unavailability Certificate signed by the minority business enterprise or from the apparent low bidder or successful offeror indicating that the minority business did not provide the written certification.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
(Company Representative Name)

Sworn and subscribed before me this \_\_\_\_\_ day.

of \_\_\_\_\_ in the year \_\_\_\_\_ Notary Public \_\_\_\_\_

-----

Reviewed and accepted by the \_\_\_\_\_ County Board of Education MBE  
Liaison.  
(County Name)

Signature \_\_\_\_\_ Date \_\_\_\_\_  
(County Representative Name)

MBE Request For Waiver Master Form (July 2002)

**CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION  
STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT**

IAC/PSCP Form 306.4

IAC/PSCP FORM 306.4

ATTACHMENT G

LEA: \_\_\_\_\_  
 FACILITY NAME: \_\_\_\_\_  
 SCOPE OF WORK: \_\_\_\_\_

DATE: \_\_\_\_\_  
 PSC NO: \_\_\_\_\_  
 REQ NO: \_\_\_\_\_

Name of MBE Sub-Contractor	MDOT Certification Number and Classification	TOTAL MBE Contract Amount	Amount to be Paid THIS Requisition	TOTAL Paid to Date	MBE has Received FINAL Payment?	If amount paid is LESS than TOTAL MBE Contract Amount, EXPLAIN VARIANCE
TOTAL:		\$ -	\$ -	\$ -		

MDOT Certification Number and Classification can be located at <http://mbe.state.mdot.state.md.us/directory/>

**MBE Classification:**

- African American = AA
- Hispanic American = H
- Native American = N
- Asian American = A
- Women = W
- African American/Women = AAW
- Hispanic American/Women = HW
- Native American/Women = NW
- Asian American/Women = AW

I certify that the figures and information presented above represent accurate and true statements, that timely payments have been and will be made to suppliers and subcontractors on this project as requisitioned payments are received, and in accordance with our contracts.

\_\_\_\_\_  
 Name of Contractor Firm

\_\_\_\_\_  
 Authorized Contractor Signature/Date

\_\_\_\_\_  
 Contractor Federal Tax ID #

\_\_\_\_\_  
 Contractor MBE Classification # (if applicable)

\_\_\_\_\_  
 Name of LEA MBE Liaison (Printed)

\_\_\_\_\_  
 Signature of LEA MBE Liaison/Date

# CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT

IAC/PSCP Form 306.4

## ATTACHMENT G

### Instructions for Completion of IAC/PSCP Form 306.4 Page 3

#### THIS FORM TO BE COMPLETED BY PRIME CONTRACTOR ONLY

1. LEA – Enter full name of LEA.
2. Facility Name – Enter full name of school/facility.
3. Scope of Work – Enter type of work being performed (i.e. New, Renovation, Roof, HVAC, ASP – Flooring, QZAB – Media Center, etc.).
4. Date – Date of Requisition.
5. PSC NO – Enter full PSC Number as assigned by PSCP.
6. REQ NO – Enter the number of the corresponding Requisition for Payment.
7. Name of MBE Sub-Contractor – Enter full name of MBE Sub-Contractor.
8. MDOT Certification Number & Classification – Enter the 5 digit MDOT Certification number and corresponding MDOT Classification for each MBE Sub-Contractor. MDOT Classifications and the MDOT website are listed at the bottom of this form.
9. TOTAL MBE Contract Amount – Enter ORIGINAL Total MBE Contract Amount as stated on MBE Attachments B and D. This amount should NOT be altered with change order amounts, changes to scope of work, etc. which may affect contract amount.
10. Amount to be Paid This Requisition – Enter the amount to be paid to the MBE Sub-Contractor for work applicable to this requisition.
11. TOTAL Paid to Date – Enter the TOTAL amount paid to date to the MBE Sub-Contractor – this amount should NOT include the amount being paid on this requisition, only the total of prior payments.
12. MBE has Received FINAL Payment – Enter "YES" if the MBE Sub-Contractor has been paid in full. Enter "NO" if the MBE Sub-Contractor has NOT been paid in full.
13. If amount paid is LESS than TOTAL MBE Contract Amount, EXPLAIN VARIANCE – Enter a brief reason for the MBE Sub-Contractor NOT being paid equal to or greater than the ORIGINAL Total MBE Contract Amount as stated on this form and MBE Attachments B & D. Additional documentation may be required to be submitted for variance explanations.
14. Name of Contractor Firm – Enter full name of Prime Contractor.
15. Authorized Contractor Signature/Date – The authorized individual employed by the Prime Contractor who filled this form out should date and sign here.
16. Contractor Federal Tax ID # – Enter the Federal Tax ID Number of the Prime Contractor.
17. Contractor MBE Classification # - Enter the MDOT MBE Classification Number if the Prime Contractor is a MDOT certified MBE Company.
18. Name of LEA MBE Liaison – PRINT the name of the LEA MBE Liaison (or other LEA authorized employee) responsible for VERIFYING ALL INFORMATION filled out by the Prime Contractor on this form.
19. Signature of LEA MBE Liaison/Date – Signature of the person VERIFYING ALL INFORMATION filled out by the Prime Contractor on this form (signature of person stated in Step #18.)

# CERTIFIED MINORITY BUSINESS ENTERPRISE PARTICIPATION STANDARD MONTHLY CONTRACTOR'S REQUISITION FOR PAYMENT

IAC/PSCP Form 306.4

## ATTACHMENT G

### Procedures for Request for Payment/Reimbursement for ALL PSCP Funded Programs

1. Use IAC/PSCP Form 306.4 Page 3.
2. The Prime Contractor must complete this Form and submit it with each Monthly Requisition/Invoice for Payment for each project in which they are seeking payment from either the Local Education Agency (LEA) or State of Maryland Public School Construction Program. If no MBE Sub-Contractors were utilized on a project (i.e., no MBE goals were set for the project and/or a full waiver was granted), this Form must still be submitted by the Prime Contractor.
  - a. IAC/PSCP Form 306.4 Page 3 must be PROJECT specific – If one bid/contract covers multiple projects (either different schools or scopes of work), this Form must be calculated and submitted by the Prime Contractor on an individual project basis.
  - b. IAC/PSCP Form 306.4 Page 3 must be Prime Contractor/Trade Package specific – If the IAC recognized multiple Prime Contractors and/or Trade Packages, this Form must be completed by each Prime/Trade Contractor recognized by the IAC and submitted.
3. All ORIGINAL MBE Sub-Contractors must be listed on this Form with their full company name, MDOT Certification Number, MDOT Classification and ORIGINAL Contract Amount as stated on MBE Attachments B & D. (ONLY MDOT Certified companies should be listed on this Form.)
4. Any additional MBE Sub-Contractors utilized on a project must be listed on this Form with their full company name, MDOT Certification Number, MDOT Classification and total contract amount. (ONLY MDOT Certified companies should be listed on this Form.)
5. The Prime Contractor should fill in the amount they intend to pay each MBE Sub-Contractor for the current requisition as well as all money paid to date. By signing this Form, the Prime Contractor is certifying their intent to pay the "Amount to be Paid This Requisition". They are also certifying the distribution of money listed under the "Total Paid to Date" column.
6. The LEA MBE Liaison shall verify each month with the MBE Sub-Contractors that all money listed under the "Total Paid to Date" column has been received from the Prime Contractor. By signing this Form, the LEA MBE Liaison is certifying all MBE Sub-Contractors have been paid all money due to them by the Prime Contractor.
7. The MBE Liaison should also be comparing the current Form with the prior month(s) to make sure information is not being duplicated and/or repeated. Payments to MBE Sub-Contractors should be progressive and recorded.
8. If for any reason, an amount the Prime Contractor listed on the Form as intending to pay the MBE Sub-Contractor was not made, or if the payment amount changed, the LEA MBE Liaison should be inquiring about the change in payment or non-payment to the MBE Sub-Contractor.
9. NO REQUESTS FOR PAYMENT/REIMBURSEMENT SHOULD BE SUBMITTED TO PSCP UNTIL THE PROCEDURES ABOVE HAVE BEEN COMPLETED.

### Additional Submission Requirements Applicable to All State Funded Projects

1. If an ORIGINAL MBE Sub-Contractor listed on MBE Attachments B and D is not paid in full and/or not utilized on a project, the Prime Contractor shall submit in writing an explanation for either the reduction in contract amount/payment or why the MBE Sub-Contractor was not utilized.
2. It is the responsibility of the LEA MBE Liaison to contact the MBE Sub-Contractor to verify the explanation provided by the Prime Contractor. Any correspondence between the LEA MBE Liaison and both the Prime Contractor and MBE Sub-Contractors should be kept by the LEA and be made available to PSCP upon request or audit.
3. If an MBE Sub-Contractor originally listed on MBE Attachment B & D becomes unavailable and/or is not going to be utilized, this information should be communicated to the PSCP MBE Program Manager and the PSCP Finance Department by the LEA immediately.
4. If additional MBE Sub-Contractors are hired after the MBE Attachments B & D have been submitted to PSCP, the LEA MBE Liaison must submit this information to the PSCP MBE Program Manager and the PSCP Finance Department immediately.

## Attachment - I

### Application to Request Substitution or Removal of MBE Subcontractor(s)

Prime Contractor: \_\_\_\_\_ Date: \_\_\_\_\_

Project Name: \_\_\_\_\_

Reason for MBE Subcontractor Change(s): \_\_\_\_\_

**List MBE Subcontractor(s) to be Removed:**

Name of MBE Subcontractor	MDOT Certification Number	Total Original MBE Contract Amount	MBE % of Total Contract

**List Replacement MBE Subcontractor(s) – if applicable\*:**

Name of MBE Subcontractor	MDOT Certification Number	Total MBE Contract Amount	MBE % of Total Contract

**\*If MBE Subcontractor(s) NOT Replaced, Please Provide “Good Faith” Effort Log:**

Name of MBE Subcontractor	MDOT Certification Number	MBE Telephone #	Reason Unavailable

Note: “good faith” effort must comply with the standards set forth at the time of bid and referenced in the bid documents.



A change in subcontractor is a material change to the contract. The following is a minimal list of documents **required** to complete the change(s). Please complete and submit the items below with this application:

1. A supporting letter on prime contractor's letter head explaining the removal and replacement (if applicable) of the original subcontractor(s). A copy of this letter must also be sent to the removed subcontractor.
2. Documentation from the MBE subcontractor(s) being removed explaining the reason.
3. A revised Attachment B - MBE Participation Schedule recording changes in MBE participation.
4. A new Attachment D – Minority Business Enterprises Subcontractor Project Participation Statement for *each* new MBE subcontractor.
5. If removed MBE subcontractor(s) is NOT replaced, an Attachment E – Minority Subcontractor Unavailability Certificate should be included for *each* subcontractor contacted during "good faith" effort to replace MBE subcontractor(s).
6. If the removed MBE subcontractor(s) is NOT replaced, an Attachment F – MBE Waiver Documentation must be included in addition to "good faith" documentation.

**Person Completing this Form**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**HCPSS Purchasing Office - ONLY**

Date Form Received: \_\_\_\_\_

Date Supporting Document(s) Received: _____	Supporting Letter (Prime)
_____	Documentation (Sub)
_____	Revised Attachment B
_____	New Attachment D
_____	Attachment E (multiple)
_____	Attachment F

APPROVED: \_\_\_\_\_ NOT APPROVED: \_\_\_\_\_

Purchasing Office Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Comments: \_\_\_\_\_

"General Decision Number: MD20230035 06/02/2023

Superseded General Decision Number: MD20220035

State: Maryland

Construction Type: Building

County: Howard County in Maryland.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> <li>. Executive Order 14026 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.</li> </ul>
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> <li>. Executive Order 13658 generally applies to the contract.</li> <li>. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.</li> </ul>

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023
2	02/03/2023
3	04/07/2023
4	05/05/2023
5	05/26/2023
6	06/02/2023

ASBE0024-007 04/01/2021

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 39.27	18.67+a

Includes the application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems

a. PAID HOLIDAYS: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the day after Thanksgiving and Christmas Day provided the employee works the regular work day before and after the paid holiday.

-----  
BRMD0001-011 04/30/2023

	Rates	Fringes
BRICKLAYER (Excluding Pointing, Caulking and Cleaning).....	\$ 36.50	13.47

-----  
CARP0197-006 05/01/2022

	Rates	Fringes
CARPENTER (Including Drywall Hanging, Form Work, Metal Stud Installation and Scaffold Building, Excluding Acoustical).....	\$ 31.40	13.86
-----		
CARP0219-002 05/01/2022		

	Rates	Fringes
MILLWRIGHT.....	\$ 34.90	16.71
-----		
CARP0474-002 05/01/2022		

	Rates	Fringes
PILEDRIVERMAN.....	\$ 34.62	16.36
-----		
* ELEC0024-012 05/28/2023		

	Rates	Fringes
ELECTRICIAN (Including low voltage wiring for and installation of alarms; HVAC controls).....	\$ 44.75	5.25%+17.20
-----		
* ELEC0024-013 05/28/2023		

	Rates	Fringes
ELECTRICIAN (Communication and Sound Equipment).....	\$ 31.60	4.75%+15.05
-----		
PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Veterans Day, Thanksgiving Day, Day after Thanksgiving, Christmas Day		

	Rates	Fringes
-----		
ENGI0037-028 04/01/2023		
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 31.43	13.92+a
OPERATOR: Bulldozer.....	\$ 33.38	13.92+a

OPERATOR: Forklift.....	\$ 33.38	13.92+a
OPERATOR: Gradall.....	\$ 33.38	13.92+a
OPERATOR: Loader (Front End)		
1 1/4 yards and over.....	\$ 33.38	13.92+a
1 Yard and Under.....	\$ 31.43	13.92+a
OPERATOR: Roller excluding		
Asphalt.....	\$ 27.80	13.92+a

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day.

-----  
IRON0005-020 06/01/2021

	Rates	Fringes
GLAZIER.....	\$ 31.17	24.16
IRONWORKER (Fence		
Erection-Chain Link/Cyclone).....	\$ 31.17	24.16
IRONWORKER, ORNAMENTAL,		
REINFORCING AND STRUCTURAL.....	\$ 31.17	24.16
IRONWORKER, SHEETING.....	\$ 31.17	24.16

-----  
LABO0710-004 04/01/2022

	Rates	Fringes
LABORER: Mason Tender -		
Cement/Concrete.....	\$ 21.06	6.06

-----  
PAIN0051-024 06/01/2022

	Rates	Fringes
PAINTER		
Brush, Roller, Spray,		
Drywall Finisher/Taper and		
Paperhanger.....	\$ 26.61	11.41
Industrial.....	\$ 33.05	12.48

-----  
PLAS0891-005 07/01/2021

	Rates	Fringes
PLASTERER (Including		
Fireproofing).....	\$ 30.53	7.93

-----  
PLAS0891-006 02/01/2020

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 28.82	11.68

-----  
 PLUM0486-014 12/16/2022

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 44.66	23.38

-----  
 ROOF0030-033 07/01/2022

	Rates	Fringes
ROOFER, Excludes Installation of Metal Roofs.....	\$ 28.45	13.71

-----  
 SFMD0669-001 04/01/2023

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 40.46	25.22

-----  
 SHEE0100-026 05/01/2022

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct Installation (Excludes Metal Roof Installation).....	\$ 36.58	22.31

-----  
 \* SUMD2010-083 04/30/2010

	Rates	Fringes
ABATEMENT WORKER: ASBESTOS (Removal from Mechanical Systems).....	\$ 12.60 **	3.91

CARPENTER (Acoustical Ceiling Installation Only).....	\$ 16.00 **	2.60
--	-------------	------

ELEVATOR MECHANIC.....	\$ 29.66	9.34
------------------------	----------	------

LABORER: Common or General.....	\$ 11.63 **	1.41
---------------------------------	-------------	------

LABORER: Grade Checker.....	\$ 16.00 **	2.90
LABORER: Landscape.....	\$ 10.00 **	0.00
LABORER: Mason Tender - Brick...	\$ 14.76 **	7.73
LABORER: Mason Tender - Stone...	\$ 14.03 **	0.00
LABORER: Mortar Mixer.....	\$ 16.61	9.08
LABORER: Pipelayer.....	\$ 13.70 **	4.11
LABORER: Mason Tender (For Pointing, Caulking and Cleaning).....	\$ 12.93 **	0.00
MASON - STONE.....	\$ 29.82	10.05
OPERATOR: Asphalt Roller.....	\$ 21.35	5.38
OPERATOR: Backhoe.....	\$ 22.78	5.94
OPERATOR: Boom.....	\$ 21.44	8.29
OPERATOR: Crane.....	\$ 20.75	3.11
OPERATOR: Excavator.....	\$ 16.95	5.69
OPERATOR: Grader/Blade.....	\$ 14.50 **	4.35
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.73	5.02
PLUMBER.....	\$ 28.22	11.12
POINTER, CAULKER, CLEANER, Includes pointing, caulking, cleaning of existing masonry, brick, stone and cement structures (restoration work); excludes pointing, caulking, cleaning of new or replacement masonry, brick, stone or cement.....	\$ 19.75	0.00
SHEET METAL WORKER (Metal Roofs Installation).....	\$ 17.00	2.55

TILE FINISHER.....	\$ 17.32	0.00
TILE SETTER.....	\$ 21.38	4.65
TRUCK DRIVER: Dump Truck.....	\$ 15.40 **	1.96
TRUCK DRIVER: Tractor Haul Truck.....	\$ 17.87	9.98

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

## Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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## WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

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This content is from the eCFR and is authoritative but unofficial.

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## Title 29 - Labor

### Subtitle A - Office of the Secretary of Labor

#### Part 5 - Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction (Also Labor Standards Provisions Applicable to Nonconstruction Contracts Subject to the Contract Work Hours and Safety Standards Act)

##### Subpart A - Davis-Bacon and Related Acts Provisions and Procedures

**Source:** 48 FR 19540, Apr. 29, 1983, unless otherwise noted.

**Authority:** 5 U.S.C. 301; R.S. 161, 64 Stat. 1267; Reorganization Plan No. 14 of 1950, 5 U.S.C. appendix; 40 U.S.C. 3141 *et seq.*; 40 U.S.C. 3145; 40 U.S.C. 3148; 40 U.S.C. 3701 *et seq.*; and the laws listed in 5.1(a) of this part; Secretary's Order No. 01-2014 (Dec. 19, 2014), 79 FR 77527 (Dec. 24, 2014); 28 U.S.C. 2461 note (Federal Civil Penalties Inflation Adjustment Act of 1990); Pub. L. 114-74 at sec. 701, 129 Stat 584.

**Source:** 48 FR 19541, Apr. 29, 1983, unless otherwise noted.

**Editorial Note:** Nomenclature changes to subpart A of part 5 appear at 61 FR 19984, May 3, 1996.

#### § 5.5 Contract provisions and related matters.

(a) The Agency head shall cause or require the contracting officer to insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, *Provided*, That such modifications are first approved by the Department of Labor):

(1) *Minimum wages.*

(i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics

performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)

- (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
  - (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (2) The classification is utilized in the area by the construction industry; and
  - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

- (iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

- (iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
- (2) **Withholding.** The (write in name of Federal Agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) **Payrolls and basic records.**
  - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
  - (ii)
    - (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the

payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency). The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the (write in name of appropriate federal agency) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the (write in name of agency), the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
    - (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
    - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
    - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
  - (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
  - (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.
- (iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the (write the name of the agency) or the Department of Labor, and shall permit such

representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) **Apprentices and trainees -**

- (i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.
- (ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress,



expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.
- (5) **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
- (6) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
- (7) **Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
- (9) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of eligibility.**
  - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

- (ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
  - (iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.
- (b) **Contract Work Hours and Safety Standards Act.** The Agency Head shall cause or require the contracting officer to insert the following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by § 5.5(a) or § 4.6 of part 4 of this title. As used in this paragraph, the terms *laborers* and *mechanics* include watchmen and guards.
- (1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
  - (2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
  - (3) **Withholding for unpaid wages and liquidated damages.** The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
  - (4) **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.
- (c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in § 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including

guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

*(The information collection, recordkeeping, and reporting requirements contained in the following paragraphs of this section were approved by the Office of Management and Budget:*

Paragraph	OMB Control No.
(a)(1)(ii)(B)	1235-0023
(a)(1)(ii)(C)	1235-0023
(a)(1)(iv)	1235-0023
(a)(3)(i)	1235-0023
(a)(3)(ii)(A)	1235-0023
	1235-0008
(c)	1235-0023

*[48 FR 19540, Apr. 29, 1983, as amended at 51 FR 12265, Apr. 9, 1986; 55 FR 50150, Dec. 4, 1990; 57 FR 28776, June 26, 1992; 58 FR 58955, Nov. 5, 1993; 61 FR 40716, Aug. 5, 1996; 65 FR 69693, Nov. 20, 2000; 73 FR 77511, Dec. 19, 2008; 81 FR 43450, July 1, 2016; 82 FR 2225, 2226, Jan. 9, 2017; 83 FR 12, Jan 2, 2018; 84 FR 218, Jan. 23, 2019; 87 FR 2334, Jan. 14, 2022; 88 FR 2215, Jan. 13, 2023]*

## EXHIBIT C

### **CONTRACTOR PERFORMANCE/EVALUATION SCORECARD**

Upon completion of a project or at any time during the project, the awarded contractor may receive a performance evaluation scorecard rating the contractor's performance on the project. The evaluation scorecard will be completed by the project manager and become part of the contractor's permanent file. A sample Contractor Performance/Evaluation Scorecard is included with the bid documents.

The evaluation scorecard shall include the following performance indicators; Quality of Work, Responsiveness, Professionalism, Resources, Schedule Management, Quality Control, Deficiency Resolution, Submittal Management, Training, Appearance, Security, Safety, Utility Conservation, Disruptions, Quality of Materials, Emergency Response, Hazardous Materials, Innovation, Teamwork, Cost Management, Billing, Compliance.

A contractor shall have up to 3 weeks after notification to appeal, challenge or otherwise dispute the scorecard results. After the 3-week period, the scorecard shall be considered final and accepted by the contractor.

A contractor receiving a 70% or less overall evaluation scorecard rating for a project may be disqualified for bidding on any future projects with the HCPSS for a period of three (3) years and/or for the remaining contract term including renewal options.

**Name of Contractor:** \_\_\_\_\_

**Name of Project:** \_\_\_\_\_ **Contract/Bid Number:** \_\_\_\_\_

**Reviewed by:** \_\_\_\_\_ **Department:** \_\_\_\_\_

Please take a moment to tell us about this contractor's performance. We will summarize all the information we obtain about each contractor and provide it to them. Supporting documentation shall be required to support any scores noted on the performance evaluation scorecard.

**HOW SATISFIED.** Please tell us **how satisfied** you are with the **performance** of the contractor named above. Circle a 10 if you are highly satisfied with their performance on a measure. Circle a 1 if you are highly dissatisfied with their performance on a measure. Circle a number in between to show different degrees of satisfaction. Circle **N/A** for any performance indicators that do not apply to the project. There are no right or wrong answers; just tell us how you feel.

**A contractor receiving a 70% or less overall evaluation scorecard rating for a project may be disqualified for bidding on any future projects with the HCPSS for a period of three (3) years and/or for the remaining contract term including renewal options. The contractor shall be notified of their performance status after each project.**

**Satisfaction with the contractor's performance:**

**Highly  
Dissatisfied**                      **Highly  
Satisfied**

- |   |                          |
|---|--------------------------|
| 1. <b>Quality of Work.</b> The contractor's ability to do the job right the first time.   | 1 2 3 4 5 6 7 8 9 10 N/A |
| 2. <b>Responsiveness.</b> The contractor's ability to adapt to changes and meet unusual needs.  | 1 2 3 4 5 6 7 8 9 10 N/A |
| 3. <b>Professionalism.</b> The courtesy and standards of conduct maintained by the contractor and his or her employees.                 | 1 2 3 4 5 6 7 8 9 10 N/A |
| 4. <b>Resources.</b> The contractor's ability to provide his or her employees with the tools, parts, and supplies needed to do the job. | 1 2 3 4 5 6 7 8 9 10 N/A |
| 5. <b>Schedule Management.</b> The contractor's ability to show up when scheduled and complete the work on time.                        | 1 2 3 4 5 6 7 8 9 10 N/A |
| 6. <b>Quality Control.</b> The contractor's ability to identify problems and  |                          |

## CONTRACTOR PERFORMANCE/EVALUATION SCORECARD

deficiencies before you do.	1	2	3	4	5	6	7	8	9	10	N/A
7. <b>Deficiency Resolution.</b> The contractor's ability to rapidly correct deficiencies in his or her work.	1	2	3	4	5	6	7	8	9	10	N/A
8. <b>Submittal Management.</b> The contractor's ability to provide submittals in a timely and efficient manner.	1	2	3	4	5	6	7	8	9	10	N/A
9. <b>Training.</b> The contractor's ability to provide employees well-trained in all aspects of their jobs.	1	2	3	4	5	6	7	8	9	10	N/A
10. <b>Appearance.</b> The contractor's ability to keep uniforms, tools, and vehicles clean so as to portray a positive image.	1	2	3	4	5	6	7	8	9	10	N/A
11. <b>Security.</b> The contractor's ability to safeguard your facilities and assets.	1	2	3	4	5	6	7	8	9	10	N/A
12. <b>Safety.</b> The contractor's ability to keep the workplace safe and comply with OSHA requirements.	1	2	3	4	5	6	7	8	9	10	N/A
13. <b>Utility Conservation.</b> The contractor's ability to use only the water, gas, electricity, and air conditioning needed to do the job.	1	2	3	4	5	6	7	8	9	10	N/A
14. <b>Disruptions.</b> The contractor's ability to keep interruptions to the operations of your firm or agency to a minimum.	1	2	3	4	5	6	7	8	9	10	N/A
16. <b>Quality of Materials.</b> The contractor's ability to use high quality parts and supplies.	1	2	3	4	5	6	7	8	9	10	N/A
17. <b>Emergency Response.</b> The contractor's ability to rapidly restore normal operations after an emergency, power outage, or severe weather.	1	2	3	4	5	6	7	8	9	10	N/A
18. <b>Hazardous Materials.</b> The contractor's ability to properly handle hazardous materials.	1	2	3	4	5	6	7	8	9	10	N/A
19. <b>Innovation.</b> The contractor's ability to use new materials and adopt new methods to increase effectiveness.	1	2	3	4	5	6	7	8	9	10	N/A
20. <b>Teamwork.</b> The contractor's ability to be a team player in order to assist in accomplishing the objectives of your firm or agency.	1	2	3	4	5	6	7	8	9	10	N/A
21. <b>Cost Management.</b> The reasonableness of the contractor's costs, especially for contract changes.	1	2	3	4	5	6	7	8	9	10	N/A
22. <b>Billing.</b> The contractor's ability to present correct and properly documented invoices.	1	2	3	4	5	6	7	8	9	10	N/A
23. <b>Compliance.</b> The contractor complied with all rules, requests, regulations and requirements. This includes compliance with instructions regarding interactions with students, staff and others.	1	2	3	4	5	6	7	8	9	10	N/A



ARCHITECTURAL PROJECT MANUAL

*for the*

**AUTOMOTIVE LAB RENOVATIONS**

*at the*

**APPLICATIONS AND RESEARCH LABORATORY**

10920 Clarksville Pike  
Ellicott City, MD 21042

*Prepared for:*

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**

9020 Mendenhall Court  
Columbia, MD 21045

**BID DOCUMENTS**

Issued: April 21, 2023

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SECTION 010000 – GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

CS	Cover Sheet
A0.01	General Information, Demo Notes & Code Analysis
A1.01	First Floor Demolition Plan
A1.02	Reflected Ceiling Demolition Plan
A2.01	First Floor New Work Plan
A2.02	Reflected Ceiling New Work Plan & Roof Plan
A3.01	Exterior Elevations, Wall Sections & Details
A4.01	Partial Plans, Millwork Details & Schedules
S0.01	General Notes & Typical Details - Structural
S1.01	Partial Plans & Sections - Structural
M1.01	First Floor Demolition Plan - Mechanical
M1.02	Roof Demolition Plan - Mechanical
M2.01	First Floor New Work Plan - Mechanical
M2.02	Roof New Work Plan - Mechanical
M4.01	Details
M5.01	Mechanical Schedules
M6.01	Mechanical Schedules
M7.01	Mechanical Specifications
M7.02	Mechanical Specifications
E0.01	Symbols, Diagrams, Details and Schedule - Electrical
E1.01	First Floor Demolition Plan – Electrical
E2.01	First Floor New Work Plan – Electrical
E7.01	Electrical Specifications
E7.02	Electrical Specifications

1.2 SCOPE

- A. The scope of the work consists of enlarging Classroom A101 with replacement of exterior wall panels, new ceilings, lighting and HVAC. It also includes limited improvements to Auto Bay #2 including light fixture replacement, addition of exhaust fan equipment, millwork upgrades, and all appurtenances as indicated on the drawings, specifications, and addenda.
- B. All work shall be complete and ready for satisfactory service.
- C. The contract drawings are diagrammatic and are intended to convey the general arrangement of the work.
- D. The contractor is responsible for the means, methods, and work scheduling associated with the installation of the mechanical and electrical systems.

1.3 CODES AND STANDARDS

- A. All work shall be performed in accordance with the edition the codes and standards that have been adopted by the authority having jurisdiction as indicated on the drawings.

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- B. In the event the contract documents are in conflict with the applicable codes, the requirements of the applicable codes shall apply.

1.4 PERMITS

- A. The contractor shall obtain and pay for all permits and certificates of inspection required by the authority having jurisdiction.
- B. The contractor shall obtain all permits and certificates of inspection required by the authority having jurisdiction. There is no permit charge for the Howard County Public School System.

1.5 SITE EXAMINATION

- A. The contractor shall examine the site and observe the conditions under which the work will be installed. No allowances will be made for errors or omissions resulting from the contractor's failure to completely examine the site.

1.6 SUBCONTRACTOR AND MANUFACTURER LIST

- A. Subcontractors and equipment manufacturers shall be listed on the Form of Proposal (Section 00300).

1.7 FIRE PREVENTION

- A. Avoid accumulation of flammable debris and waste within the building and vicinity. Avoid large and unnecessary accumulations of combustible forms and form lumber.
- B. Store flammable or volatile liquids in the open or in small detached structure or trailers. Handle liquids with low flash points that are to be used within the building in approved safety cans. Supervise closely the storage of paint materials and other combustible finishing and cleaning products. Do not permit oily rags to be stored in closets or other tight permanent spaces.
- C. Tobacco use is prohibited on the school property.
- D. Closely supervise welding and torch cutting operations near combustible materials.
- E. Use only fire-resistant building paper, plastic sheet, and tarpaulins for temporary protection.
- F. Do not store combustible material outdoors within 10 feet of a building or structure.
- G. Do not use gasoline for cleaning within the building under any circumstances.
- H. Do not burn any trash or other material on site.
- I. Take other precautions suitable for hazardous conditions at the site to prevent fire.

1.8 ACCIDENT PREVENTION AND SAFETY

- A. Comply with all applicable laws, ordinances, rules, regulations, and orders of governing authorities having jurisdiction for the safety of persons and property to protect them from damage, injury, or loss.

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- B. Erect and maintain, as required by conditions and progress of the work, all necessary safeguards for safety and protection, including fences, railings, barricades, lighting, posting of danger signs and other warnings against hazards.

1.9 CLEAN-UP

- A. Throughout the course of the work, the contractor shall keep the premises free from the accumulation of dirt and debris.
- B. Upon completion of the work, the contractor shall clean the premises to the satisfaction of the owner.

1.10 WORK IN EXISTING BUILDINGS

- A. Sufficient provisions shall be made to protect occupied areas from all dirt and debris resulting from the work.
- B. Where mechanical and electrical systems pass through renovated areas to serve other portions of the building, they shall remain or be suitably relocated and the system restored to normal operation.

1.11 OUTAGES

- A. All proposed outages of the mechanical and electrical systems that are required for the proper execution and completion of the work by the contractor shall be requested by the contractor in writing at least one week in advance.
- B. The contractor shall inform the owner of all systems that will be affected by the outages and also the duration of each outage.
- C. The owner shall determine the date and time of each outage in order to minimize the disruption to the operation of the facility. In most cases, outages will be scheduled to occur outside of normal business hours. Additional compensation to the contractor shall not be made for any work associated with the outages.
- D. The owner will be responsible to notify all affected personnel and to ensure that all affected systems are prepared for the outages.
- E. The contractor shall be responsible for all work associated with the shutting down and starting up the affected systems which may include, but not be limited to, normal electric power, fire protection, plumbing, and HVAC systems.
- F. The contractor may, at his option, pay to have the owner's personnel to be on-site during an outage to assist the contractor in coordinating the shutting down and starting up of the affected systems.
- G. Where the duration of the proposed outages cannot be tolerated by the owner, the contractor shall provide temporary connection as required to maintain service.

1.12 EXISTING SYSTEMS AFFECTED BY THE WORK

- A. Prior to commencement of construction, the owner will advise the contractor of the operating capabilities of those portions of the following systems that may remain and, at the contractor's option, will demonstrate to the contractor the operating capabilities of these systems, which will be considered first class if not demonstrated.

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1. Automatic fire sprinkler system.
2. Fire alarm system.

- B. During construction, the contractor shall make every effort to protect the above-listed systems, including, but not limited to, providing temporary supports for devices located in ceilings to be removed, providing plastic bags for protection of devices from dust and debris, and repositioning of system wiring to avoid damage.
- C. In the presence of the owner, demonstrate the final system operating capabilities equal to the capabilities determined prior to the commencement of construction.

1.13 EXISTING SERVICES

- A. The contractor shall verify the size and location of all existing services. The contractor shall notify the engineer of all discrepancies that exist between the contract documents and the existing services before making any connections to the existing services.

1.14 ASBESTOS

- A. Should the contractor encounter any known or suspected asbestos at any time during the course of the work, he shall remove his workers from the affected area, notify the owner immediately, and await instructions from the owner.

1.15 PROTECTION OF NONROADWAY SURFACES

- A. The contractor shall lay down mats to protect all non-roadway surfaces from damage by cranes and any trucks that will be used to remove the existing equipment and install the new equipment.
- B. The contractor shall be responsible to repair or replace all non-roadway surfaces damaged as part of the work to the satisfaction of the owner.

1.16 DEMOLITION

- A. Demolition shall be performed as neatly as practical and with the minimum disruption to the building activities and occupants.
- B. Remove all existing hangers and supports associated with the demolition work.
- C. All equipment and materials being removed, and not indicated to be given to the owner, shall be disposed of by the contractor in accordance with all federal, state, and local laws, ordinances, rules, and regulations.
- D. All equipment and materials indicated to be reused or given to the owner shall be carefully removed so as not to damage the equipment or material, or affect its reuse. Any such equipment and materials damaged by the contractor shall be replaced new by the contractor at no expense to the owner.

1.17 WORKING HOURS

- A. Normal working hours for the project shall be weekdays (excluding holidays) from 6:30 a.m. to 3:00 p.m.

#### 1.18 CUSTODIAL SERVICES

- A. The contractor shall pay for custodial services for all work that will be performed outside of normal working hours. Custodial services will be provided by the HCPSS at a rate of \$35.00 per hour, to be paid for by the contractor through a deduct change order to the contract. The school custodian shall open and close the school, and be present at all times that work is performed in the school. The contractor shall provide the HCPSS with forty-eight hours of advance notice for all work that will be performed outside of normal working hours.

#### 1.19 PHOTOGRAPHIC DOCUMENTATION

- A. The contractor shall take photographs of all areas of work before and after the work is performed. Photographic documentation shall be submitted in electronic and printed format with the closeout documents. File names of the photographs shall be added to the redlined as-built drawings by the contractor where each photograph was taken.

#### 1.20 PROJECT SCHEDULE

- A. Major construction milestones shall be as scheduled below. Should the contractor fail to complete major milestones as scheduled, the owner may issue a cure notice or take any action deemed necessary to return the delayed major milestones and any related successor functions back on schedule, as soon as possible, at the contractor's expense.
- B. The contractor shall develop a detailed project schedule, approximately sequencing all required work, including shop drawing submittals, equipment fabrication periods, etc.
- C. Major construction milestones shall be as follows:
  - 1. Contract award date: September 07, 2023
  - 2. Shop Drawing submittals: December 07, 2023
  - 3. Pre-construction meeting: April 04, 2024
  - 4. Construction timeline: Spring break 2024 thru Summer break 2024 pending availability
  - 5. Substantial completion: August 16, 2023

PRODUCTS (Not Used)

EXECUTION (Not Used)

END OF SECTION 010000

SECTION 012600 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
  - 1. Division 01 Section “Unit Prices” for administrative requirements for using unit prices.
  - 2. Division 01 Section “Product Requirements” for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue through Construction Manager supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, “Architect’s Supplemental Instructions.”

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Construction Manager will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal requests issued by Construction Manager are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Construction Manager.

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1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with the requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Proposal Requests.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Construction Manager will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Construction Manager may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

## SECTION 012900 – PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
  - 1. Division 1 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 2. Division 1 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

#### 1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
  - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittals Schedule.
    - c. Contractor's Construction Schedule.
  - 2. Submit the Schedule of Values through Construction Manager at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
  - 1. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Name of Engineer.



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- c. Engineer's project number.
  - d. Contractor's name and address.
  - e. Date of submittal.
2. Submit draft of AIA Document G703 Continuation Sheets.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or Division.
  - b. Description of the Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value.
    - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate. Include separate line items under required principal subcontracts for operation and maintenance manuals, punch list activities, project record documents, and demonstration and training in the amount of 5 percent of the Contract Sum.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing.
7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and Construction Manager and paid for by Owner.
  1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

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- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Progress payments shall be submitted to Engineer by the tenth day of the month. The period covered by each Application for Payment is one month, ending on the last day of the previous month.
- D. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.
  - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit five (5) signed and notarized original copies of each Application for Payment to Engineer. One copy shall include waivers of lien and similar attachments.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
  - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  - 2. When an application shows completion of an item, submit final or full waivers.
  - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  - 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's Construction Schedule (preliminary if not final).
  - 4. Products list.
  - 5. Schedule of unit prices.
  - 6. Submittals Schedule (preliminary if not final).
  - 7. List of Contractor's staff assignments.
  - 8. List of Contractor's principal consultants.
  - 9. Copies of building permits.
  - 10. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.

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11. Initial progress report.
  12. Report of preconstruction conference.
  13. Certificates of insurance and insurance policies.
  14. Performance and payment bonds.
  15. Data needed to acquire Owner's insurance.
  16. Initial settlement survey and damage report if required.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
  2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  3. Updated final statement, accounting for final changes to the Contract Sum.
  4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  6. AIA Document G707, "Consent of Surety to Final Payment."
  7. Evidence that claims have been settled.
  8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  9. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

## SECTION 013100 – PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Administrative and supervisory personnel.
  - 2. Project meetings.
  - 3. Requests for Interpretation (RFIs).
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections include the following:
  - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
  - 2. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

#### 1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

#### 1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's Construction Schedule.
  - 2. Preparation of Schedule of Values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Project closeout activities.
  - 7. Startup and adjustment of systems.
  - 8. Project closeout activities.

## 1.5 SUBMITTALS

- A. Key Personnel Names: Within seven (7) days after execution of the Agreement, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list work and mobile telephone numbers. Provide names and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post a copy in the temporary field office.

## 1.6 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site.
1. Attendees: Inform participants and others involved, and individuals whose presences is required, of date and time of each meeting. Notify Construction Manager and Engineer of scheduled meeting dates and times.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Construction Manager and Engineer, within three (3) days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before construction at a time convenient to Construction Manager and Engineer, but no later than seven (7) days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments. Engineer will record and distribute meeting minutes.
- C. Progress Meetings: Conduct progress meetings at biweekly intervals. Coordinate dates of meetings with preparation of payment requests.
1. Agenda: Review and correct or approve minutes of previous progress meetings. Review other items of significance that could affect progress. Include topics for discussion as appropriate for status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
  2. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule to Engineer within two (2) days of the meeting.
  3. Minutes: Engineer will record and distribute meeting minutes and Contractor's Construction Schedule.

## 1.7 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately upon discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, Contractor prepare and submit an RFI via e-mail in Adobe Acrobat format to Contract Manager and Engineer.

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1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
  3. RFIs shall include a detailed description of item needing interpretation.
  4. RFIs shall be numbered sequentially.
  5. RFIs shall include Specification Section number and title, Drawing number and detail references, and field dimensions as appropriate.
  6. RFIs shall include Contractor's suggested solution(s), and impact of solution(s) on Contract Time or the Contract Sum.
- B. Engineer's Action: Engineer will review each RFI, determine action required, and return it to the Construction Manager and Contractor. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
- C. RFI Log: Contractor shall prepare, maintain, and submit on a weekly basis a tabular log of RFIs organized by RFI number.

1.8 COORDINATION WITH UTILITY COMPANY

- A. The contractor shall coordinate all activities associated with the local utility company (Baltimore Gas and Electric Company [BGE]). Coordination shall include the following, as required: electric service upgrade.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

## SECTION 013200 – CONSTRUCTION PROGRESS DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting progress of construction during performance of the Work, including the following:
  - 1. Contractor's Construction Schedule.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting minutes.
  - 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.

#### 1.3 SUBMITTALS

- A. Contractor's Construction Schedule: Submit an electronic copy of schedule via e-mail in Adobe Acrobat format to Contract Manager and Engineer. Include type of schedule (Initial or Updated).

#### 1.4 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from parties involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in the proper sequence.

### PART 2 - PRODUCTS

#### 2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for commencement of Work to date of Final Completion.
- C. Activities: Treat each separate area as a separate numbered activity for each principal element of the Work.

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- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
  2. Work Restrictions: Show the effect of the following items on the schedule:
    - a. Limitations of continued occupancies (while school is in session).
  3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
    - a. Submittals.
    - b. Purchases.
    - c. Mockups.
    - d. Installation.
    - e. Tests and inspections.
    - f. Adjusting.
    - g. Curing.
    - h. Startup and placement into final use and operation.
  4. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide the following”
    - a. Structural completion.
    - b. Architectural completion.
    - c. Completion of mechanical installation.
    - d. Completion of electrical installation.
    - e. Substantial Completion.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.

## 2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully-developed, Gantt-chart type, Contractor's Construction Schedule within fourteen (14) days after execution of the Agreement.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
1. For construction activities that require three (3) months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

## 2.3 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site and e-mail report each day to Construction Manager and Engineer:
1. List of subcontractors at Project site.
  2. Approximate count of personnel at Project site.
  3. Equipment at Project site.
  4. Material deliveries.
  5. Description of construction activities of each subcontractor.



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6. Accidents.
7. Stoppages, delays, shortages, and losses.
8. Equipment or system tests and startup.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At biweekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule two (2) days before each regularly scheduled progress meeting.
  1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting within two (2) days of meeting to Engineer and Construction Manager.
  2. Post a copy of the updated schedule in the temporary field office.
  3. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  4. As the Work progresses, indicate Actual Completion percentage for each activity.

END OF SECTION 013100

## SECTION 013300 – SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
  - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
  - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule.
  - 4. Division 01 Section "Closeout Procedures" for submitting warranties.
  - 5. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 6. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 7. Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
  - 8. Divisions 02 through 49 Sections for specific requirements for submittals in those Sections.

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Engineer's and Construction Manager's responsive action.
- B. Informational Submittals: Written information that does not require Engineer's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements.

#### 1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Engineer and Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

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- B. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow fifteen (15) days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer or Construction Manager will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow fifteen (15) days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Engineer's consultants, Owner, or other parties is indicated, allow twenty-one (21) days for initial review of each submittal.
- C. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Engineer and Construction Manager.
    - d. Name and address of Contractor.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Submittal number or other unique identifier, including revision identifier.
      - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
    - i. Number and title of appropriate Specification Section.
    - j. Drawing number and detail references, as appropriate.
    - k. Location(s) where product is to be installed, as appropriate.
    - l. Other necessary identification.
- D. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- E. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal electronically via e-mail using a transmittal form. Engineer and Construction Manager will discard submittals received from sources other than Contractor.
- F. Resubmittals: Make resubmittals in same form as initial submittal.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked "Approved; Approved as Noted; No Exceptions Taken; or Reviewed, Comments Noted."

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- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Use only final submittals with mark indicating "Approved; Approved as Noted; No Exceptions Taken; or Reviewed, Comments Noted" by Engineer and Construction Manager.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
  - 1. Submit electronic submittals in Adobe Acrobat format directly to Engineer and Construction Manager via e-mail.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
    - j. Standard product operation and maintenance manuals.
    - k. Compliance with specified referenced standards.
    - l. Testing by recognized testing agency.
    - m. Application of testing agency labels and seals.
    - n. Notation of coordination requirements.
  - 4. Submit Product Data before or concurrent with Samples.
  - 5. Number of Copies: Submit one (1) electronic copy of Product Data in Adobe Acrobat format, unless otherwise indicated. Engineer through Construction Manager will return one (1) electronic copy in Adobe Acrobat format.
  - 6. Copies for Operation and Maintenance Manuals: Contractor shall prepare three (3) opaque copies of each submittal for operation and maintenance manuals.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.

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- c. Fabrication and installation drawings.
  - d. Roughing-in and setting diagrams.
  - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
  - f. Shopwork manufacturing instructions.
  - g. Templates and patterns.
  - h. Schedules.
  - i. Design calculations.
  - j. Compliance with specified standards.
  - k. Notation of coordination requirements.
  - l. Notation of dimensions established by field measurement.
  - m. Relationship to adjoining construction clearly indicated.
  - n. Seal and signature of professional engineer if specified.
  - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
  3. Number of Copies: Submit one (1) electronic copy in Adobe Acrobat format of each submittal. Engineer through Construction Manager, will return one copy.
  4. Copies for Operation and Maintenance Manuals: Contractor shall prepare three (3) opaque copies of each submittal for operation and maintenance manuals.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Attach label on unexposed side of Samples that includes the following:
    - a. Generic description of Sample.
    - b. Product name and name of manufacturer.
    - c. Sample source.
    - d. Number and title of appropriate Specification Section.
  3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit three (3) full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Engineer, through Construction Manager, will return submittal with options selected.

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5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - a. Number of Samples: Submit three (3) sets of Samples. Engineer and Construction Manager will retain two (2) Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
    - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
    - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three (3) sets of paired units that show approximate limits of variations.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
  1. Type of product. Include unique identifier for each product.
  2. Number and name of room or space.
  3. Location within room or space.
  4. Number of Copies: Submit three (3) copies of product schedule or list, unless otherwise indicated. Engineer, through Construction Manager, will return two (2) copies.
    - a. Mark up and retain one returned copy as a Project Record Document.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction Manager's action.
- G. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  1. Name, address, and telephone number of entity performing subcontract or supplying products.
  2. Number and title of related Specification Section(s) covered by subcontract.
  3. Drawing number and detail references, as appropriate, covered by subcontract.

## 2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.

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1. Number of Copies: Submit one (1) electronic copy of Product Data in Adobe Acrobat format, unless otherwise indicated. Engineer through Construction Manager will return one (1) electronic copy in Adobe Acrobat format.
  2. Copies for Operation and Maintenance Manuals: Contractor shall prepare three (3) opaque copies of each submittal for operation and maintenance manuals.
  3. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
  2. Date of evaluation.
  3. Time period when report is in effect.
  4. Product and manufacturers' names.
  5. Description of product.
  6. Test procedures and results.

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7. Limitations of use.
- L. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- M. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- N. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- O. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- P. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Q. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  1. Preparation of substrates.
  2. Required substrate tolerances.
  3. Sequence of installation or erection.
  4. Required installation tolerances.
  5. Required adjustments.
  6. Recommendations for cleaning and protection.
- R. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
  1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- S. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.



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T. Material Safety Data Sheets (MSDSs): Submit information directly to Owner; do not submit to Engineer.

1. Engineer will not review submittals that include MSDSs and will return the entire submittal for resubmittal.

### 2.3 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three (3) copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer and Construction Manager.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

### 3.2 ENGINEER'S AND CONSTRUCTION MANAGER'S / ACTION

A. General: Engineer and Construction Manager will not review submittals that do not bear Contractor's approval stamp and will return them without action.

B. Action Submittals: Engineer and Construction Manager will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer and Construction Manager will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.

C. Informational Submittals: Engineer and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer and Construction Manager will forward each submittal to appropriate party.

D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

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- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

## SECTION 015000 – TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes requirements for temporary utilities and support facilities.
- B. Related Sections include the following:
  - 1. Division 01 Section "Summary" for limitations on utility interruptions and other work restrictions.

#### 1.3 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

#### 1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards for regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

### PART 2 - PRODUCTS

#### 2.1 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of construction personnel. Keep office clean and orderly. Furnish and equip office with furniture for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
- D. Store combustible materials apart from building.

#### 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

- A. Locate facilities as directed by Owner and where they will serve Project adequately and result in minimum interference with performance of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed.

#### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Connect to existing service.
  - 1. Arrange with Owner for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Electric Power Service: Use of Owner's existing electric power service will be permitted, as long as equipment is maintained in a condition acceptable to Owner.
  - 1. Install electric power service overhead to temporary facility connected to an existing panelboard in the building.

#### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  - 1. Provide incombustible construction for offices, shops, and sheds located within 30 feet (9 m) of building lines. Comply with NFPA 241.
  - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion.
  - 3. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- B. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Locate waste-collection containers as directed by Owner.

#### 3.4 OPERATION, TERMINATION, AND REMOVAL

- A. Termination and Removal: Remove each temporary facility when need for its service has ended, or no later than Substantial Completion. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Where area is intended for landscaping, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Provide topsoil and reseed grassy areas that are affected by temporary facilities. Grass seed mixture shall be as specified by Owner.

END OF SECTION 015000

## SECTION 016000 – PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
  - 1. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.
  - 2. Divisions 02 through 49 Sections for specific requirements for warranties on products and installations specified to be warranted.

#### 1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

#### 1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.

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1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
  2. Form: Tabulate information for each product under the following column headings:
    - a. Specification Section number and title.
    - b. Generic name used in the Contract Documents.
    - c. Proprietary name, model number, and similar designations.
    - d. Manufacturer's name and address.
    - e. Supplier's name and address.
    - f. Installer's name and address.
    - g. Projected delivery date or time span of delivery period.
    - h. Identification of items that require early submittal approval for scheduled delivery date.
  3. Completed Submittal: Within fourteen (14) days after date of commencement of the Work, submit an electronic copy in Adobe Acrobat format of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
    - a. At Contractor's option, an initial submittal may be made which will be limited to product selections and designations that must be established early in Contract period.
  4. Engineer's Action: Engineer will respond in writing to Contractor within fifteen (15) days of receipt of completed product list. Engineer's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Engineer's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- B. Substitution Requests: Submit an electronic copy in Adobe Acrobat format of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use CSI Form 13.1A.
  2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
    - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - e. Samples, where applicable or requested.
    - f. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners.
    - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

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- i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    - j. Cost information, including a proposal of change, if any, in the Contract Sum.
    - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
  3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Engineer will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
    - a. Form of Acceptance: Change Order.
    - b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.
- C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  1. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Engineer will notify Contractor through Construction Manager of approval or rejection of proposed comparable product request within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
    - b. Use product specified if Engineer cannot make a decision on use of a comparable product request within time allocated.
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
  1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
  2. If a dispute arises between contractors over concurrently selectable but incompatible products, Engineer will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."



## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Engineer will make selection.
  5. Where products are accompanied by the term "match sample," sample to be matched is Engineer's.
  6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
  7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
  2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
  3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
  4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
  5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
  6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
  7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
  8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
  9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

- a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
    - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
    - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Engineer will consider requests for substitution if received within sixty (60) days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.
- B. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
  1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
  2. Requested substitution does not require extensive revisions to the Contract Documents.
  3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  4. Substitution request is fully documented and properly submitted.
  5. Requested substitution will not adversely affect Contractor's Construction Schedule.
  6. Requested substitution has received necessary approvals of authorities having jurisdiction.
  7. Requested substitution is compatible with other portions of the Work.
  8. Requested substitution has been coordinated with other portions of the Work.
  9. Requested substitution provides specified warranty.
  10. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

## 2.3 COMPARABLE PRODUCTS

- A. Conditions: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:
  1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.

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2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of engineers and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

## SECTION 017300 – EXECUTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. General installation of products.
  - 2. Progress cleaning.
  - 3. Starting and adjusting.
  - 4. Protection of installed construction.
  - 5. Correction of the Work.
- B. Related Sections include the following:
  - 1. Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical, plumbing, and electrical systems and other construction affecting the Work.
  - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

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- a. Description of the Work.
  - b. List of detrimental conditions, including substrates.
  - c. List of unacceptable installation tolerances.
  - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

### 3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  1. Make vertical work plumb and make horizontal work level.
  2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
  4. Maintain minimum headroom clearance of 8 feet (2.4 m) in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

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- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Engineer.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.4 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

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- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.5 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: Provide a factory-authorized service representative to inspect field-assembled components and equipment installation where required.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

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- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300



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SECTION 017329 – CUTTING AND PATCHING

PART 1 - GENERAL

- A. Unless otherwise directed, the contractor shall perform all cutting and patching required by the mechanical and electrical work.
- B. The contractor shall not cut reinforced concrete or structural steel without the engineer's approval.
- C. All patching shall be uniform in appearance and shall match the surrounding surface.
- D. The contractor shall repair any damage to the existing building or furnishings resulting from the mechanical and electrical work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017329

## SECTION 017700 – CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Warranties.
  - 3. Final cleaning.
- B. Related Sections include the following:
  - 1. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
  - 2. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 3. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 4. Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
  - 5. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

#### 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  - 8. Complete startup testing of systems.
  - 9. Submit test/adjust/balance records.
  - 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.

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11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

#### 1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training videotapes.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within fifteen (15) days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

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1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - g. Sweep concrete floors broom clean in unoccupied spaces.
    - h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
    - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials.

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- Replace chipped or broken glass and other damaged transparent materials.  
Polish mirrors and glass, taking care not to scratch surfaces.
  - j. Remove labels that are not permanent.
  - k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces.  
Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - l. Wipe surfaces of mechanical and electrical equipment and similar equipment.  
Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - m. Replace parts subject to unusual operating conditions.
  - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - p. Clean ducts, blowers, and coils if units were operated without filters during construction.
  - q. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.  
Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
  - r. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 017823 – OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE MANUALS

- A. Upon completion of the work, the contractor shall submit to the engineer for approval three (3) hard copies of operation and maintenance (O&M) manuals in 3-ring binders and one (1) Adobe Acrobat file on CD of the O&M manual for all mechanical and electrical equipment. Included in each manual shall be:

1. Approved submittals.
2. All manufacturers' technical and product information, rated capacities, accessories, maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list, source information, and warranties.
3. Contractor's warranty (two years from the date of acceptance by the owner).
4. Videotaped recording of the owner training session(s) on CD.
5. Other pertinent information for each piece of equipment.

**Note:** Assemble the entire O&M manual, including the items listed above, into a single Adobe Acrobat file, with dividers identifying each section (approved submittals, as-built ATC shop drawings, etc.), and e-mail it to Engineer to review prior to submitting the three (3) hard copies of the O&M manuals to Engineer. (This cannot be done until the engineer has received, reviewed, and approved the testing, adjusting, and balancing report.) After receiving and incorporating the engineer's comments into the O&M manual, send three (3) hard copies and one (1) Adobe Acrobat file on CD of the O&M manual to Engineer for final review and acceptance.

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

SECTION 017839 – PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
  - 3. Record Product Data.
- B. Related Sections include the following:
  - 1. Division 1 Section "Closeout Procedures" for general closeout procedures.
  - 2. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 3. Divisions 02 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit one (1) set of marked-up Record Prints.
  - 2. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Initial Submittal: Submit an electronic copy in Adobe Acrobat format of marked-up Record Prints. File shall show changes to drawing in color. Engineer will initial and date each drawing and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable. Engineer will return Adobe Acrobat file for organizing into sets, printing, binding, and final submittal.
    - b. Final Submittal: Submit one (1) set of marked-up Record Prints, and an Adobe Acrobat file on CD. Print each Drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit an electronic copy in Adobe Acrobat format of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit an electronic copy in Adobe Acrobat format of each approved Product Data submittal.
  - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

## PART 2 - PRODUCTS

### 2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
  2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations below first floor.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or Construction Change Directive.
    - k. Changes made following Engineer's written orders.
    - l. Details not on the original Contract Drawings.
    - m. Field records for variable and concealed conditions.
    - n. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
  4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Newly Prepared Record Drawings: Prepare new Drawings instead of preparing Record Drawings where Engineer determines that neither the original Contract Drawings nor Shop Drawings are suitable to show actual installation.
1. New Drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
  2. Consult Engineer and Construction Manager for proper scale and scope of detailing and notations required to record the actual physical installation and its relation to other construction. Integrate newly prepared Record Drawings into Record Drawing sets; comply with procedures for formatting, organizing, copying, binding, and submitting.



- C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
  - 1. Record Prints: Organize Record Prints and newly prepared Record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  - 2. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Engineer and Construction Manager.
    - e. Name of Contractor.

## 2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  - 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
  - 5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

## 2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  - 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

## 2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

## PART 3 - EXECUTION

### 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

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- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's and Construction Manager's reference during normal working hours.

END OF SECTION 017839

SECTION 017900 – DEMONSTRATION AND TRAINING

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DEMONSTRATION

- A. Upon completion of the work, the contractor shall demonstrate to the owner's satisfaction that all components of the work are connected, calibrated, and operating in accordance with the intent of the system design.
- B. Contractor shall demonstrate the proper operation of each mode of operation for each system, subsystem, and equipment.
- C. If, during the demonstration, any mode of operation fails to perform as designed, at the Engineer's option, the demonstration will be cancelled and rescheduled until after the problem has been resolved by the Contractor. The Contractor will be responsible to pay on a time and materials basis the salaries and wages of all parties in attendance at the demonstration to attend the second, and subsequent, demonstration(s) until the Contractor successfully demonstrates that all systems, subsystems, and equipment are connected, calibrated, and operating in accordance with the intent of the system design.

3.2 TRAINING

- A. Thoroughly instruct the owner's representatives for no less than eight (8) hours in the proper operation and maintenance of all mechanical and electrical equipment and systems.

3.3 DEMONSTRATION AND TRAINING VIDEOTAPES

- A. General: Demonstration and training session shall be professionally videotaped by the contractor. The recording shall be provided to the owner on a compact disc as part of the closeout documents.
- B. Narration: Describe scenes on videotape by audio narration by microphone while videotape is being recorded. Include description of items being viewed.

END OF SECTION 017900

## SECTION 033543 - POLISHED CONCRETE FINISHING

### PART 1 - GENERAL

- 1.1 Section includes polished concrete finishing, including stain.
- 1.2 Provide Product Data for each type of product.
- 1.3 Field sample panels may be used to verify that Contractor can produce polished concrete of required finish, color, and consistency of appearance.

### PART 2 - PRODUCTS

#### 2.1 STAIN MATERIALS

- A. Penetrating Stain: Water-based, acrylic latex, penetrating stain with colorfast pigments.
  1. List of Manufacturers and Products:
    - a. H&C Colortop Water-based Concrete Stain or equal
    - b. Scofield Formula One Liquid Dye and Selectseal Plus Water-based sealer
  2. Description: A water-based sealer for improving concrete surface hardness, resistance to dirt pick-up and ease of polishing. Product is resistant to salts, acids, alkalis, water, mildew, UV rays, oil, and wet or dry abrasion.
  3. Product is available in a variety of ready-to-use colors or clear finish. Final determination should be made following removal of existing floor finish and slab condition is exposed.

#### 2.2 LIQUID FLOOR TREATMENTS

- A. Penetrating Liquid Floor Treatments for Polished Concrete Finish: Clear, waterborne solution of inorganic silicate or silicate materials and proprietary components; odorless; that penetrates, hardens, resists staining and is suitable for polished concrete surfaces.

### PART 3 - EXECUTION

#### 3.1 POLISHING

- A. Polish: Level 2: Low sheen, 400 grit
- B. Apply polished concrete finish system to cured and prepared slabs.
  1. Machine grind floor surfaces to receive polished finishes level and smooth.
  2. Apply reactive stain for polished concrete in polishing sequence and according to manufacturer's written instructions.
  3. Apply penetrating liquid floor treatment for polished concrete in polishing sequence and according to manufacturer's written instructions, allowing recommended drying time between successive coats.
  4. Apply penetrating stain for polished concrete in polishing sequence and according to manufacturer's written instructions.

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5. Continue polishing with progressively finer-grit diamond polishing pads to gloss level, to match approved mockup.
6. Control and dispose of waste products produced by grinding and polishing operations.
7. Neutralize and clean polished floor surfaces.

3.2 STAINING

- A. Newly placed concrete shall be at least 30 days old before staining.
- B. Prepare surfaces according to manufacturer's written instructions and as follows:
  1. Clean concrete thoroughly by scraping, applying solvents or stripping agents, sweeping and pressure washing, or scrubbing with a rotary floor machine and detergents recommended by stain manufacturer. Rinse until water is clear and allow surface to dry.
    - a. Do not use acidic solutions to clean surfaces.
  2. Test surfaces with droplets of water. If water beads and does not penetrate surface, or penetrates only in some areas, profile surfaces by acid etching. Retest and continue profiling surface until water droplets immediately darken and uniformly penetrate concrete surfaces.
  3. Apply acidic solution to dampened concrete surfaces, scrubbing with uncolored, acid-resistant nylon-bristle brushes until bubbling stops and concrete surface has texture of 120-grit sandpaper. Do not allow solution to dry on concrete surfaces. Rinse until water is clear. Control, collect, and legally dispose of runoff.
  4. Neutralize concrete surfaces and rinse until water is clear. Test surface for residue with clean white cloth. Test surface according to ASTM F 710 to ensure pH is Retain "Scoring" Paragraph below if scoring patterns in concrete surfaces are required. If unstained joints are required or only one color is used, score joints after staining.
- C. Allow concrete surface to dry before applying stain. Verify readiness of concrete to receive stain according to ASTM D 4263 by tightly taping 18-by-18-inch, 4-mil thick polyethylene sheet to a representative area of concrete surface. Apply stain only if no evidence of moisture has accumulated under sheet after 16 hours.
- D. Penetrating Stain: Apply penetrating stain to concrete surfaces according to manufacturer's written instructions and as follows:
  1. Apply first coat of stain to dry, clean surfaces by airless sprayer or by high-volume, low-pressure sprayer.
  2. Allow to dry four hours and repeat application of stain in sufficient quantity to obtain color consistent with approved mockup.
  3. Rinse until water is clear. Control, collect, and legally dispose of runoff.

END OF SECTION 033543

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SECTION 042200 – CONCRETE UNIT MASONRY

PART 1—GENERAL

1.1 SUBMITTAL

- A. Submit color samples for selection from manufacturer's series. Submit product literature, certifications, test reports and full-size sample(s) of each color specified.

1.2 QUALITY ASSURANCE

- A. Certifications (Split Face, Gemstone, Gemstone Plus, Temple Stone, Rustic Face, Smooth Face): Concrete blocks for finishing shall conform to ASTM C90. The provisions of ASTM C90, apply with regard to appearance.
- B. All units contain an integral water repellent and CMU admixture at the time of manufacture.
- C. Fire Resistance: Define hourly ratings required as 1, 2, 3 or 4 hours.
- D. Field-Constructed Mock-Ups: Construct a sample panel, no less than 4' x 4', of units of each color & size to be used in the project. York Building Products requires a sample panel to be installed at the jobsite prior to installation of any Gemstone, Gemstone Plus, or Temple Stone products. The panel must be approved by either the owner or architect for the project.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Masonry units shall be delivered to the jobsite on pallets or standard cube format. Store product in single stacks on level ground and cover with waterproof covering (e.g., tarpaulins) to protect the blocks from inclement weather. Handle blocks carefully to avoid breakage and damage to the surfaces.

1.4 PROJECT/SITE CONDITIONS

- A. Protection of Work: Cover tops of walls each day after installation to keep open walls protected and dry. After units are installed, they should be protected from staining or other damage by covering the bottom of the walls with plastic.

PART 2—PRODUCTS

2.1 PRODUCT NAME

- A. Standard Concrete Masonry Units: ASTM C-90-IIb – Normal weight load bearing masonry units meeting requirements of ASTM C-33.
- B. Architectural Split Face CMU with Integral Water Repellant - Normal weight load bearing masonry units meeting requirements of ASTM C-33. Split face units are manufactured with liquid integral water repellant admixture compliant with ASTM E514. Color: SANDSTONE

2.2 MANUFACTURER

## 2.3 MORTAR AND GROUT MATERIALS

- A. Setting Mortar: ASTM C91/C 91M - Workrite Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- B. Pointing Mortar: Colored mortar for Split Face CMU – Workrite Colored Masonry Cement Mortar, WR2158 “S”. In all exterior mortar, use water-repellent mortar additive available from York Building Products and follow manufacturer's instructions.

## 2.4 SIZES AND SHAPES

- A. Standard Concrete Masonry Units
  - 1. Hollow Stretcher – Size 6”x8”x16” nominal
  - 2. Hollow Corner stretcher for outside corners
- B. Architectural Split Face CMU with integral water repellent
  - 1. Hollow Stretcher – Size 4”x8”x16” nominal
  - 2. Hollow Corner Stretcher – Size 4”x6”x16” nominal

## 2.5 REINFORCEMENT

- A. Uncoated-Steel Reinforcing Bars: ASTM A 615 or ASTM A 996, Grade 60.
- B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.
- C. Masonry-Joint Reinforcement, General: ASTM A 951/A 951M.
  - 1. Interior Walls: Mill galvanized, carbon steel.
  - 2. Exterior Walls: Hot-dip galvanized carbon steel.
  - 3. Wire Size for Side Rods: 0.148-inch diameter.
  - 4. Wire Size for Cross Rods: 0.148-inch diameter.
  - 5. Spacing of Cross Rods: Not more than 16 inches o.c.
  - 6. Provide in lengths not less than 10 feet with prefabricated corner and tee units.

## 2.6 TIES AND ANCHORS

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
  - 1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82, with ASTM A 153 Class B-2 coating.
  - 2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008, Commercial Steel, with ASTM A 153, Class B coating.

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3. Steel Plates, Shapes, and Bars: ASTM A 36.
- B. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- diameter, hot-dip galvanized-steel wire.
  2. Tie Section: Triangular-shaped wire tie made from 0.187-inch-diameter, hot-dip galvanized-steel wire.
- C. Rigid Anchors: Fabricate from steel bars 1-1/2 inches wide by 1/4 inch thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm) or with cross pins unless otherwise indicated.
1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

## 2.7 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing as follows:
1. Fabricate metal drip edges from stainless steel. Extend at least 3 inches into wall and 1/2 inch out from wall, with outer edge bent down 30 degrees and hemmed.
  2. Fabricate metal sealant stops from stainless steel. Extend at least 3 inches into wall and out to exterior face of wall. At exterior face of wall, bend metal back on itself for 3/4 inch and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
1. Flexible Flashing: Use one of the following unless otherwise indicated: Copper fabric by AFCO Products Inc, C-Fab Flashing as manufactured by Hohmann and Barnard, Inc., Copper Fabric Flashing as manufactured by Dur-0-Wall Inc.
2. Fabric flashing shall be comprised of a single sheet of 5 ounce copper bounded on both sides by asphalt saturated glass fabric.
3. Flashing shall be continuous wherever possible. Where not possible, end joints of flashing shall be overlapped 6" min. and shall be sealed with fibrated asphalt mastic as approved by flashing manufacture.
- B. Adhesives, Primers and Seam Tapes for Flashings: Flashings manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

## 2.8 MISCELLANEOUS MASONRY ACCESSORIES



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- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Preformed Control-Joint Gaskets: Material as indicated below, designed to fit standard block and maintain lateral stability in masonry wall: size and configuration as indicated:
  - 1. Styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805.
  - 2. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
  - 3. Weep Holes: Open head joints with polyethylene plastic mesh inserts. Color as selected by Architect from manufacturer's full range.
  - 4. Weep Hole Clears: The Mortar Net, or equal, 10" high. Thickness to match cavity (2").

2.9 MASONRY-CELL FILL

- A. Loose-Fill Insulation: Perlite complying with ASTM C 549, Type II (surface treated for water repellency and limited moisture absorption) or Type IV (surface treated for water repellency and to limit dust generation).
- B. Lightweight-Aggregate Fill: ASTM C 331/C 331M.

2.8 INSULATION

- A. Spray Polyurethan Foam Insulation. Typical at all cavity wall unless noted otherwise

2.9 MASONRY CLEANERS

- A. Use masonry cleaners such as EaCo Chem Masonry Cleaner OR Prosoco SureKlean Vana Trol. Follow manufacturer's instructions for proper mixing and application. Do not apply cleaner with pressure spray above 50 psi. CAUTION! Never use Muriatic Acid solution on units. Masonry cleaners are specified and to be used on architectural CMU only. No cleaners are needed on standard CMU. Rubbing & pointing of walls only, is required.

PART 3—EXECUTION

3.1 INSTALLATION

- A. Lay blocks from more than one pallet at a time during installation. Lay units using the best concrete masonry practices. Lay blocks with the faces level, plumb and true to the line strung horizontally at the face. Complete masonry construction using procedures and workmanship consistent with the best masonry practices.

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- B. Cutting: Make all unit cuts, including those for bonding, holes, boxes, etc., with motor-driven masonry saws, using either an abrasive or diamond blade. Cut neatly and locate for best appearance.
- C. Mortar Bedding and Jointing:
- Lay units with full mortar coverage on head and bed joints, taking care not to block cores to be grouted or filled with masonry insulation.
  - Tool all mortar joints -when thumbprint hard - into a concave configuration.
  - Remove mortar from the face of masonry units before it sets.
  - Tuckpoint the joints of scored units for proper appearance. All exterior scored units must be tuckpointed to prevent water penetration. DO NOT USE RAKE JOINTS – UNLESS NOTED.

3.2 INSTALLATION RECOMMENDATIONS

- Cavity wall construction is recommended for exterior walls, with proper flashing, venting and weep holes.
- Use a complementary or matching mortar color when using colored masonry units.
- Always test a small, inconspicuous area before using cleaners. Do not use acids or abrasives on finished surfaces.

3.3 FLASHING OF MASONRY WORK

Install flashing at locations shown in the plans and in strict accordance with the details and the best masonry flashing practices.

3.4 WEEPS AND VENTS

Install weep holes and vents at proper intervals (32" O.C. above bed joints, typical) at courses above grade, above flashing and at any water stops over windows, doors and beams.

3.5 INSPECTION

The textured or ground faces shall be free from chips, cracks or any other imperfection that would detract from the overall appearance of the finished wall when viewed from a distance of twenty (20) feet at right angles to the wall with normal lighting.

3.6 CLEANING

Keep walls clean daily during installation using brushes. Do not allow excess mortar lumps or smears to harden on the finished surfaces. Harsh cleaning methods after walls have been erected may mar the surface of the blocks.

3.7 FINAL CLEANDOWN

Clean the completed walls with masonry cleaner, strictly following the manufacturer's instructions—including thorough rinsing. Do not use acid or abrasives on the finished surfaces. Failure to strictly follow manufacturer's instructions can result in permanent damage to the block faces. (See prior section on Masonry Cleaners.)

3.8 MAINTENANCE

Properly installed and cleaned architectural masonry units need virtually no maintenance other than routine cleaning with standard commercial grade cleaning agents.

END OF SECTION 042200

SECTION 064116 - PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS AND COUNTERTOPS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Plastic-laminate-clad architectural cabinets.
2. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-clad architectural cabinets that are not concealed within other construction.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.

B. Shop Drawings:

1. Include plans, elevations, sections, and attachment details.
2. Apply AWI Quality Certification Program label to Shop Drawings.

C. Samples: For each exposed product and for each color and texture specified.

1.4 CLOSEOUT SUBMITTALS

- A. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1. Manufacturer's Certification: Licensed participant in AWI's Quality Certification Program.

- B. Installer Qualifications: Manufacturer of products.

## PART 2 - PRODUCTS

### 2.1 ARCHITECTURAL CABINET MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements.

### 2.2 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS AND COUNTERTOPS

- A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.
- B. Architectural Woodwork Standards Grade: Custom.
- C. Type of Construction: Frameless.
- D. Door and Drawer-Front Style: Flush overlay.
- E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by quality standard.
  - 1. Wilsonart or equal which will match existing laminate pattern and color.
    - a. Base and wall cabinets: Wilsonart #4621-60 "White Nebula"
    - b. Countertop and Backsplash: Wilsonart #4779-60 "Pewter Brush"
- F. Laminate Cladding for Exposed Surfaces:
  - 1. Horizontal Surfaces: Grade HGS.
  - 2. Vertical Surfaces: Grade VGS.
  - 3. Cabinet door edges: PVC edge banding, 0.12 inch thick, black color to match existing cabinets
  - 4. Shelf edges PVC tape, 0.018-inch minimum thickness, matching laminate in color, pattern, and finish.
  - 5. Pattern Direction: Vertically for drawer fronts, doors, and fixed panels.
- G. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, NEMA LD 3, Grade BKL.
- H. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
  - 1. As indicated by laminate manufacturer's designations.
  - 2. Match Architect's sample.
  - 3. As selected by Architect from laminate manufacturer's full range in the following categories:
    - a. Patterns, matte finish.

## WOOD MATERIALS

- I. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified unless otherwise indicated.

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1. Wood Moisture Content: 5 to 10 percent.
- J. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified unless otherwise indicated.
  1. Medium-Density Fiberboard (MDF): ANSI A208.2, Grade 130.
  2. Particleboard: ANSI A208.1, (HMR) – high moisture resistant.

## 2.3 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Butt Hinges: 2-3/4-inch, five-knuckle steel hinges made from 0.095-inch- thick metal, and as follows:
  1. Semi-concealed Hinges for Overlay Doors: BHMA A156.9, B01521.
- C. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 100 or 135 degrees of opening
- D. Back-Mounted Pulls: BHMA A156.9, B02011.
- E. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter to match existing.
- F. Catches: Magnetic catches, BHMA A156.9, B03141.
- G. Adjustable Shelf Standards and Supports: match existing.
- H. Shelf Rests: BHMA A156.9, B04013; two-pin plastic with shelf hold-down clip.
- I. Door and Drawer Silencers: BHMA A156.16, L03011.
- J. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
  1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.
  2. Satin Stainless Steel: BHMA 630.
- K. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

## 2.4 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesive for Bonding Plastic Laminate: Contact cement.

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1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

## 2.5 FABRICATION

- A. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- B. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.
- B. Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to be installed.
- C. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head cabinet installation screws.
- D. Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches using concealed shims.
  1. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
  2. Install cabinets without distortion so doors and drawers fit openings and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
  3. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish.

### 3.2 FIELD QUALITY CONTROL

- A. Inspections: Provide inspection of installed Work through AWI's Quality Certification Program certifying that woodwork, including installation, complies with requirements of the Architectural Woodwork Standards for the specified grade.
  1. Inspection entity shall prepare and submit report of inspection.

END OF SECTION 064116

SECTION 07 27 26 - FLUID APPLIED MEMBRANE AIR BARRIERS

PART 1: GENERAL

1.1 SUMMARY

- A. This Section includes requirements for supplying labor, materials, tools, and equipment to complete the Work as shown on the Drawings Architectural Division as specified herein including, but not limited to, the following:
  - 1. Fluid Applied Vapor Permeable Air Barrier
  - 2. Flashings
  - 3. Flashing Primer
  - 4. Sealant
  - 5. Thru-wall Flashing

1.2 SUBMITTALS

- B. Action Submittals:
  - 1. Product Data:
    - a. Air Barrier Manufacturer's guide specification
    - b. Air Barrier Manufacturer's technical data sheets
    - c. Air Barrier Manufacturer's details

1.3 QUALITY ASSURANCE

- C. Single Source Responsibility:
  - 1. Obtain air barrier, flashings, sealants and primers from a single Air Barrier Manufacturer regularly engaged in the manufacturing and supply of the specified products.
  - 2. Verify product compliance with federal, state, and local regulations.
- D. Manufacturer Qualifications:
  - 1. Air Barrier Manufacturer must not issue warranties for terms longer than they have been manufacturing and supplying specified products for similar scope of Work.
- E. Installer Qualifications:
  - 1. Perform Work in accordance with Air Barrier Manufacturer published literature and as specified in this section.
  - 2. Maintain one (1) copy of Air Barrier Manufacturer's installation instructions on site.
  - 3. Allow the Air Barrier Manufacturer representative site access during installation.
  - 4. Contact the Air Barrier Manufacturer a minimum of two weeks prior to scheduling a meeting.

1.2. DELIVERY, STORAGE, AND HANDLING

- A. Delivery of Materials:
  - 1. Deliver materials to the jobsite in undamaged and clearly marked containers and/or wrapping indicating the name of the Air Barrier Manufacturer and product.
- B. Storage of Materials:
  - 1. Store materials as recommended by the Air Barrier Manufacturer and conform to applicable safety regulatory agencies. Refer to all applicable data including, but not limited to, Safety Data Sheets, Product Data sheets, product labels, and specific instructions for personal protection.

2. Keep solvents away from open flame or excessive heat.
3. Store rolled materials on end.

C. Handling:

1. Product requirements may vary. Refer to product specific Safety Data Sheet.

### 1.3. SITE CONDITIONS

A. Environmental Requirements:

1. Do not perform Work during rain.
2. Do not perform Work on frost covered or wet substrates.
3. Product requirements may vary. Refer to product specific Technical Data Sheet.

B. Protection:

1. It is the responsibility of the installing Subcontractor to protect all surfaces not included in scope of Work from damage.
2. Protect top and backside of substrate walls against bulk water during and after application of air barrier.

### 1.4. WARRANTY

A. Manufacturer Material Warranty:

1. Provide Air Barrier Manufacturer's standard ten (10) year material warranty.

## PART 2: PRODUCTS

### 2.01. MANUFACTURER

A. Acceptable Manufacturers:

Henry Company [www.Henry.com](http://www.Henry.com)  
999 N. Pacific Coast Highway, Suite 800  
El Segundo, CA 90245  
(800) 486-1278

### 2.02. MATERIALS

A. Fluid Applied Vapor Permeable Air Barrier (Basis of Design):

1. Single-component, water-based, water-resistive air barrier designed to provide a vapor permeable air and water barrier when applied on above-grade wall assemblies, having the following typical properties:
  - a. Basis of Design: Henry® Air-Bloc® 17MR Fluid Applied Vapor Permeable Air Barrier
  - b. Color: Graphite
  - c. Vertical and lateral flame propagation: meets IBC NFPA 285 Exception #2 Per ASTM E1354 and ASTM E84
  - d. Solids Content:
    1. Weight: 63%
    2. Volume: 53%
  - e. Minimum Application Temperature: +20 °F (-6 °C)
  - f. Service Temperature: -40 °F to +180 °F (-40 °C to +82 °C)
  - g. Water Vapor Permeance (ASTM E96):
    1. Method B: 14 perms
  - h. Air Permeance:



1. Material (ASTM E2178): 0.0001 cfm/ft<sup>2</sup> (0.0005 L/s.m<sup>2</sup>)
2. Air Leakage – Assembly (ASTM E2357): Pass
- i. Elongation (ASTM D412): 250%
- j. Tensile Strength (ASTM D412): 140 psi
- k. Nail Sealability (AAMA 711/ASTM D1970 modified): Pass
- l. Water Absorption (ASTM D570): 5.6%
- m. Surface Burning Characteristics (ASTM E84):
  1. Flame Spread Index: 10, Class A
  2. Smoke developed: 15, Class A
- n. Fire Testing (NFPA 285): Complies in various assemblies
- o. VOC Content, max (EPA Method 24): 100g/L Method 24
- p. Declaration Status: LBC Red List Free

**B. Auxiliary Materials**

1. Flashings; choose from the following:
  - a. Liquid-applied flashing:
    1. Moisture-cure one component elastomeric liquid applied flashing using an STPE (Silyl-Terminated Polyether) polymer, having the following typical properties:
      - a. Basis of Design: Henry® Air-Bloc LF® Liquid Applied Flashing
      - b. Color: Blue
  - b. Self-Adhered flashing:
    1. Vapor impermeable, self-adhered water resistive air and vapor barrier consisting of an SBS rubberized asphalt compound, integrally laminated to a blue engineered thermoplastic film, having the following typical properties:
      - a. Basis of Design: Henry Blueskin® SA Self-Adhered Water Resistive Air Barrier
      - b. Color: Blue
2. Adhesives/Primers for Self-Adhered Flashing:
  - a. Standard VOC:
    1. Synthetic rubber based quick setting adhesive; having the following typical physical properties:
      - a. Basis of Design: Henry® Blueskin® Adhesive
      - b. Color: Blue
      - c. VOC Content, max (EPA Method 24): 450g/L Method 24
  - b. Low VOC:
    1. Synthetic rubber based quick setting adhesive with low VOC content; having the following typical physical properties:
      - a. Basis of Design: Henry® Blueskin® LVC Adhesive
      - b. Color: Blue
      - c. VOC Content, max (EPA Method 24): <240g/L Method 24
    2. Polymer emulsion-based primer for self-adhered membranes, and having the following typical properties:
      - a. Basis of Design: Henry® Aquatac™ Primer
      - b. Color: Aqua.
      - c. VOC Content, max (EPA Method 24): 50g/L Method 24
3. Sealants:
  - a. Moisture cure, medium modulus polymer modified sealing compound, having the following typical properties:
    1. Basis of Design: Henry® 925 BES Sealant
    2. Complies with Fed. Spec. TT-S-00230C, Type II, Class A.
    3. Complies with ASTM C920, Type S, Grade NS, Class 35.
4. Thru-Wall Flashing:

- a. Vapor impermeable, self-adhered water resistive air and vapor barrier consisting of an SBS rubberized asphalt compound, integrally laminated to a yellow engineered thermoplastic film, having the following typical properties:
  - 1. Basis of Design: Henry® Blueskin® TWF Self-Adhered Thru-Wall Flashing
  - 2. Color: Yellow

## **PART 3: EXECUTION**

### **3.01. EXAMINATION**

- A. It is the installing Subcontractor's responsibility to verify the substrate is in accordance with Air Barrier Manufacturer requirements and as specified in this Section prior to installation of air barrier. Commencement of the Work or any parts thereof, indicates installer acceptance of the substrate.
  - 1. Acceptable substrates include exterior-grade gypsum sheathing, plywood, OSB, precast or cast-in-place concrete, CMU, primed steel, aluminum mill finish, anodized aluminum, and galvanized metal.
  - 2. Verify surfaces are sound, clean and free of frost, oil, grease, dirt, excess mortar or other contaminants.
  - 3. Substrate must be continuous and secure.
  - 4. Sheathing fasteners must be installed into solid backing and set flush with sheathing.
  - 5. Masonry joints must be struck flush. Allow fresh CMU mortar joints to cure for a minimum of thirty-six (36) hours.
  - 6. Tie holes/voids in poured concrete to be flush and smooth shall be filled. Allow new concrete to cure a minimum of sixteen (16) hours after forms are removed.
  - 7. Top and backside of substrate walls must be protected against bulk water during and after application of air barrier.
  - 8. Curing compounds must be resin based without oil, wax or pigments. Substrates must be free of form release agents.
- B. Notify contractor in writing of any conditions that are not acceptable.
- C. Do not apply air barrier assembly components until substrate and environmental conditions are in accordance with Air Barrier Manufacturer's published literature.

### **3.02. PREPARATION**

- A. Verify surfaces are in accordance with the product specific technical data sheet and as stated in this specification.
- B. Protection:
  - 1. Protect top and backside of substrate walls against bulk water during and after application of air barrier.

### **3.03. INSTALLATION**

- A. Environmental Requirements:
  - 1. Do not perform Work during rain or inclement weather.
  - 2. Do not perform Work on frost covered or wet substrates; can be applied to damp surfaces.
  - 3. Do not perform Work when ambient (air) and substrate temperatures are below 20 °F (-6 °C).

- B. Refer to Air Barrier Manufacturer detail drawings for installation procedures including, but not limited to, the following:
  - 1. Changes in substrate
  - 2. Control joints
  - 3. Crack treatment
  - 4. Inside corners
  - 5. Outside corners
  - 6. Penetrations
  - 7. Rough openings
  - 8. Sheathing Joints
- C. Moving Joints:
  - 1. Contact Air Barrier Manufacturer.
- D. Contact Air Barrier Manufacturer to coordinate transition of air barrier to adjacent areas including, but not limited to, the following:
  - 1. Roofing
  - 2. Waterproofing
  - 3. Fastener penetrations
- E. Thru-Wall Flashing:
- F. Primary Air Barrier
  - 1. Install air barrier assembly in accordance with Air Barrier Manufacturer product specific TDS, details, guide specification, and technical bulletins to create a monolithic air and watertight application without sags, runs or voids.
  - 2. Lap air barrier onto flashing (1) inch (2.5 cm) minimum.
  - 3. Application Rate:
    - a. Application rates and cured dry film thickness are approximate, and may vary depending on texture and porosity of surface.
    - b. Smooth surfaces:
      - 1. Wet film thickness (WFT): 70 mils
      - 2. Dry film thickness (DFT): 37 mils
    - c. Rough surfaces:
      - 1. Wet film thickness (WFT): 90 mils
      - 2. Dry film thickness (DFT): 37 mils

#### 3.04. FIELD QUALITY CONTROL

- A. Final Observation and Verification:
  - 1. General Contractor and Air Barrier Manufacturer to complete final observation of air barrier assembly as required by warranty.

#### 3.05. CLEANING

- A. As the Work proceeds, and upon completion, promptly clean up and remove from the premises all rubbish and surplus materials resulting from the foregoing Work.
- B. Clean soiled surfaces, spatters, and damage to adjacent areas caused by Work of this Section.
- C. Check area to ensure cleanliness and remove debris, equipment, and excess material from the site.

END OF SECTION 072726

## SECTION 079200 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Interior latex joint sealants.
  - 2. Exterior joint sealants.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.

### PART 2 - PRODUCTS

#### 2.1 JOINT SEALANTS, GENERAL

- A. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

#### 2.2 INTERIOR SEALANTS

- A. Provide paintable acoustical acrylic latex sealant at millwork locations indicated to receive painted finish, to close reasonable gaps in construction and provide a paintable surface, and at terminations of metal stud tracks, gypsum and other sheathing panels, as an acoustical seal.
- B. Latex joint sealant ASTM C 834, Type: OP, Grade: NF.
- C. Interior Sealant Manufacturers: Contractor's option from the following:
  - 1. Pecora Corporation (AC-20)
  - 2. Sherwin-Williams Company (PowerHouse)
  - 3. Tremco Incorporated (Tremflex 834)

#### 2.3 EXTERIOR JOINT SEALANTS

- A. Exterior grade sealants for application to concrete paving, perimeter joints around doors and window framing, exterior masonry and finish cladding materials, and masonry movement joints.
- B. Exterior Sealant Manufacture: Basis of Design – Tremco Sealants
- C. Provide single-component products approved for use for specific application by manufacturer based on products stated below.

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1. Sealant for Concrete Paving: Tremco Vulkem 45 SSL; one-part, moisture-curing, low-modulus polyurethane sealant.
  2. Sealant for Masonry and perimeter Window & Door framing: Tremco Dymonic 100; high performance, medium-modulus, low-VOC, UV stable, non-sag polyurethane sealant.
- D. Joint Backing: Provide continuous closed cell foam backing rods sized for joint
- E. At concrete paving joints, form through-slab joints with fibrous material 1/2" thick unless notes otherwise. Product: WR Meadows Fibre Lite, or equal.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
1. Remove laitance and form-release agents from concrete.
  2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces.

3.2 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with ASTM C 1193 and joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
  2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.

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1. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

END OF SECTION 079200

SECTION 095123 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. Acoustical tiles for interior ceilings.
  - 2. Direct-hung, metal suspension systems.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Reflected ceiling plans, drawn to scale, and coordinated with each other, using input from installers of the items involved.
- B. Product test reports.
- C. Research reports.
- D. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: Class A according to ASTM E 1264.
  - 2. Smoke-Developed Index: 50 or less.

2.2 ACOUSTICAL TILES – ACT-1

- A. Basis of design: USG Radar Basic Acoustical Panels

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- B. Acoustical Tile Standard: Manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264.
- C. Classification: Non-directional lay-in ceiling tile, Item #2110
- D. Color: White
- E. Light Reflectance (LR): 0.83.
- F. Ceiling Attenuation Class (CAC): 35.
- G. Noise Reduction Coefficient (NRC): 0.55.
- H. Articulation Class (AC): 33.
- I. Edge/Joint Detail: Square
- J. Thickness: 5/8 inch.
- K. Modular Size: 24 by 24 inches.

2.3 METAL SUSPENSION SYSTEM - ACT-1

- A. Basis of design: USG Donn Brand DX Acoustical Suspension System
- B. Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, pre-painted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation.
  - 1. Structural Classification: Intermediate-duty system.
  - 2. Access: Upward and side pivoted, with initial access openings of size indicated below and located throughout ceiling within each module formed by main and cross runners, with additional access available by progressively removing remaining acoustical tiles.
    - a. Initial Access Opening: In each module, 24 by 24 inches

2.4 ACCESSORIES

- A. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated.

2.5 METAL EDGE MOLDINGS AND TRIM

- A. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations; formed from sheet metal of same material, finish, and color as that used for of suspension-system runners.



PART 3 - EXECUTION

3.1 PREPARATION

- A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated.
- B. Layout openings for penetrations centered on the penetrating items.

3.2 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

- A. Install suspended acoustical tile ceilings according to ASTM C 636/C 636M, and manufacturer's written instructions.
- B. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.
  - 1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
  - 2. Do not use exposed fasteners, including pop rivets, on moldings and trim.
- C. Arrange directionally patterned acoustical tiles as indicated on reflected ceiling plans.

END OF SECTION 095123

## SECTION 099123 – INTERIOR PAINTING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Concrete masonry units (CMUs).
2. Steel and iron.
3. Gypsum wallboard.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
- B. Samples: For each type of paint system and in each color and gloss of topcoat.

#### 1.3 QUALITY ASSURANCE

- A. Mockups: Match existing field painting.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis of Design: Sherwin Williams
- B. Products: Subject to compliance with requirements, provide product listed in the Interior Painting Schedule for the paint category indicated.

#### 2.2 PAINT, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:

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1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- C. Colors: Match existing paint colors as indicated in a color schedule.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows: Masonry (Clay and CMUs): 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
  1. Application of coating indicates acceptance of surfaces and conditions.

#### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

#### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- C. All new construction and restored surfaces shall have one coat primer/sealer and 2 coats of appropriate paint. Apply primer coat to material which has not been prime coated by other. Tint primer for deep colors.

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- D. Omit first coat (primer) on surfaces (metal, CMU or gypsum wallboard) which have been shop primed and touched up painted. One coat paint.

INTERIOR PAINTING SCHEDULE

A. CMU Substrates:

1. Latex System:

- a. Block Filler: Block filler, latex, interior/exterior.
- b. Intermediate Coat: Latex, interior, matching topcoat.
  - 1) Loxon Concrete & Masonry Primer/ Sealer
- c. Topcoat: Latex, interior, semi-gloss.
  - 1) Loxon XP Waterproofing Masonry Coating

B. Steel Substrates: (Hollow Metal Frames (shop primed), Exterior Structural Steel)

1. Alkyd System:

- a. Prime Coat: Primer, alkyd, anti-corrosive, for metal.
- b. Intermediate Coat: Alkyd, interior, matching topcoat.
- c. Topcoat: Alkyd, interior, semi-gloss
  - 1) Sherwin Williams Pro Industrial Alkyd Urethane Enamel Semi-Gloss  
(Note: Confirm compatibility with existing paint coating)

C. Gypsum Wallboard Substrates:

1. Latex System:

- a. Prime Coat: Latex, interior, matching topcoat.
  - 1) Sherwin Williams ProMar 200 Zero VOC Interior Latex Primer
- b. Intermediate Coat: Latex, interior, matching topcoat.
- c. Topcoat: Latex, interior, semi-gloss
  - 1) Sherwin Williams ProMar 200 Zero VOC Interior Latex Eg-Shel

END OF SECTION 099123

## SECTION 101143 – VISUAL DISPLAY SURFACES

### PART 1 – GENERAL

#### 1.01 DESCRIPTION OF WORK

A. Section Includes:

1. Porcelain Enamel Steel Markerboards and Chalkboards
2. Tackboards
3. Field-Applied Trim

#### 1.02 REFERENCED STANDARDS

A. American Society for Testing Materials

1. ASTM E84 Standard Test Method for Surface Burning Characteristics for Building Materials
2. ASTM B221 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wires, Profiles and Tubes

B. Porcelain Enamel Institute

1. PEI-1002 Manual and Performance Specifications for Porcelain Enamel Writing Surfaces

C. GREENGUARD Certification from UL Environment

1. Meets GREENGUARD Gold Standard for Chemical Emissions for Building Materials, Finishes and Furnishings

#### 1.03 SUBMITTALS

- A. Shop Drawings: Provide shop drawings for each type of visual display board required.
- B. Product Data: Provide technical data for materials specified. Include Material Safety Data Sheets, when applicable.
- C. Samples and color charts: Provide Manufacturer's color charts and composition samples of face, core, backing and trim to illustrate finish, color and texture, where required.
- D. Manufacturer's Instructions: Provide Manufacturer's installation instructions.

#### 1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Manufacturer shall be a firm engaged in the manufacture of visual display boards in the USA.
2. Manufacturer shall have a minimum of 5 years of experience in the manufacture of visual display boards.

B. Regulatory Requirements: Conforms to applicable code for flame/smoke rating in tackboards in accordance with ASTM E84.

C. Product Certifications: Provide GREENGUARD Gold certificate for markerboards, as applicable.

D. Operation and Maintenance: Include data on regular cleaning, stain removal, and precautions.

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1.05 PROJECT CONDITIONS

- A. Field measure prior to preparation of shop drawings and fabrication to ensure proper fit.
- B. Comply with manufacturer's recommendations for acclimating area for interior moisture and temperature to approximate normal occupied conditions.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Schedule delivery of visual display boards with spaces sufficiently complete so that visual display boards can be installed upon delivery.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store materials protected from exposure to harmful weather conditions and at temperatures and humidity conditions recommended by manufacturer.

1.07 WARRANTY

- A. Submit a "Life of the Building" warranty, stating that under normal usage and maintenance, and when installed in accordance with manufacturer's instructions and recommendations, Claridge porcelain enamel steel markerboard and chalkboard writing surfaces are guaranteed for the Life of the Building. Guarantee covers replacement of defective boards but does not include cost of removal or reinstallation.
- B. Submit a standard warranty, stating that when installed in accordance with manufacturer's instructions and recommendations, Claridge tackboards are guaranteed for one year against defects in materials and workmanship. Guarantee does not cover normal wear and tear, improper handling, any misuse, or any defects caused by vandalism or subsequent abuse. Guarantee covers replacement of defective material but does not include cost of removal or reinstallation.
- B. Writing Surface Warranty Period: Ten years commencing on Date of Substantial Completion.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design for Visual Display Board Manufacturer:
  - a. Claridge Products and Equipment, Inc.  
Harrison, Arkansas 7260  
Toll Free: 800-434-4610  
Telephone: 870-743-2200  
E-mail: [claridge@claridgeproducts.com](mailto:claridge@claridgeproducts.com)  
website: [www.claridgeproducts.com](http://www.claridgeproducts.com).

2.02 MATERIALS FOR MARKERBOARD AND CHALKBOARD PANELS

- A. Writing Surface Face Sheet – Manufactured in accordance with Porcelain Enamel Institute's specification.
  - 1. Shall be enameling grade cold rolled steel manufactured from a minimum of 30 percent post-consumer and post-industrial waste.
  - 2. Enameling grade steel shall be coated with LCS<sup>3</sup> Porcelain Enamel by Claridge Products and Equipment.
    - a. 3-Coat process shall include:
      - i. Bottom Ground Coat – 1.5 to 2.2 mils

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- ii. Top Ground Coat – 2.0 to 2.8 mils
- iii. Top Cover (Color) Coat – 3.0 to 4.0 mils
- 3. Firing Temperature: Enamel shall be fired at lowest possible temperatures to reduce steel and porcelain stresses and achieve superior enamel and hardness.
- 4. Color: LCS<sup>3</sup> No. 100 White

B. Writing Surface Core

- 1. 7/16" Medium Density Fiberboard (MDF) composed of approximately 90% postindustrial waste.

C. Writing Surface Backing: Moisture Barrier Back

D. Factory Framed Markerboards and Chalkboards

- 1. Face Sheet: LCS<sup>3</sup> porcelain enamel steel Markerboard
- 2. Core Material: 7/16" MDF
- 3. Backing: Standard Moisture Barrier Back
- 4. Series: 1
- 5. Typical Arrangement: Type F with Combination Markerboard/Tackboard
- 6. Panel Size: 4'H x 12'W
- 7. Color: LCS No. 100 White

2.03 MATERIALS FOR TACKBOARD PANELS

- A. Claridge Cork: Composed of 1/4" thick self-healing, burlap backed cork laminated to a 1/4" hardboard backing

- B. Colors: Buff #1109 or Smoke #1111

- C. Thickness: Total laminated thickness of core and covering is 1/2". All thicknesses are nominal.

D. Factory Framed Tackboards

- 1. Tack Surface: Claridge Cork
- 2. Series: Series 1
- 3. Typical Arrangement: Type F with Combination Markerboard/Tackboard
- 4. Panel Size: 4'H x 3' W and 1'H x 16' W As indicated on Drawings
- 5. Panel Color: Color charts furnished on request.

2.04 ALUMINUM TRIM

- A. Trim shall be 6063 alloy grade aluminum with T5 tempering in accordance with ASTM B221, and shall have 201-R1 satin anodize finish.

- 1. Factory Built Trim
  - a. Series: 1

B. Accessories:

- 1. Marker Tray/Chalktrough
  - a. Standard continuous, solid, blade-type aluminum tray with ribbed section and injection molded end closures at bottom of each markerboard or chalkboard
  - b. Standard continuous, hollow, box-type aluminum tray with injection molded end closures at bottom of each markerboard or chalkboard
- 2. Map Rail
  - a. Standard continuous 1" map rail with cork insert and end stops at the top of each markerboard and chalkboard
  - b. Map Hooks: Two map hooks furnished for map rail on factory-framed units
    - ii. Roller Brackets: (2)
    - iii. Flag Holders: (1)

PART 3 – EXECUTION

3.01 PROJECT CONDITIONS

- A. Verify before installation that interior moisture and temperature approximate normal occupied conditions and HVAC is in place and working.
- B. Verify that wall surfaces are true and plumb and are prepared and ready to receive boards.

3.02 INSTALLATION

- A. Deliver factory-built units completely assembled and of dimensions shown in details and in accordance with manufacturer's shop drawings as approved by the architect.
- B. Follow manufacturer's instructions for storage and handling of units before installation.
- C. Do not install boards on damp walls or in damp and humid weather without heat in the building.
- D. Install level and plumb, keeping perimeter trim straight in accordance with manufacturer's recommendations.

3.03 ADJUST AND CLEAN

- A. Verify that all accessories are installed as required for each unit.
- B. At completion of work, clean surfaces and trim in accordance with manufacturer's recommendations, leaving all materials ready for use.

END OF SECTION 101143



SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Subbase course for concrete walks.
  2. Subbase course and base course for asphalt paving.
  3. Drainage course under slab on grade.

1.2 DEFINITIONS

- A. Backfill: Soil material used to fill an excavation.
1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
  2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
  2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

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- J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct pre-excavation conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

- A. Material test reports.

1.5 FIELD CONDITIONS

- A. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth-moving operations.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487 or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
  - 1. Liquid Limit:
  - 2. Plasticity Index:
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
  - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 294/D 2940M 0; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.

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- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and zero to 5 percent passing a No. 8 sieve.

## 2.2 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

### 3.2 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
  - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

### 3.3 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

### 3.4 SUBGRADE INSPECTION

- A. Proof-roll subgrade below pavements with a pneumatic-tired dump truck to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.

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- B. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect, without additional compensation.

3.5 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Architect.
  - 1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.6 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.7 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal, so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
  - 1. Under walks and pavements, use satisfactory soil material.

3.8 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
  - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.9 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.

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- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
  - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
  - 2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.

3.10 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

3.11 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
  - 1. Shape subbase course and base course to required crown elevations and cross-slope grades.
  - 2. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
  - 3. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.12 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
  - 1. Place drainage course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
  - 2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.13 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform inspections:
- B. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

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- C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- D. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.14 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.15 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000

SECTION 321216 - ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cold milling of existing asphalt pavement.
2. Hot-mix asphalt paving.
3. Hot-mix asphalt overlay.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to hot-mix asphalt paving including, but not limited to, the following:
  - a. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
  - b. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Herbicide
2. Paving Geotextile
3. Joint Sealant

B. Hot-Mix Asphalt Designs:

Certification, by authorities having jurisdiction, of approval of each hot-mix asphalt design proposed for the work.

INFORMATIONAL SUBMITTALS

C. Qualification Data: For paving-mix manufacture and testing agency.

D. Material Certificates: For Aggregates Asphalt Binder, Asphalt cement and Tack Coat.

E. Field quality-control reports.

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1.4 QUALITY ASSURANCE

- F. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the DOT of state in which Project is located.
- G. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Howard County DPW and Maryland DOT for asphalt paving work.
  - 1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: ASTM D 692/D 692M, sound; angular crushed stone, crushed gravel, or cured, crushed blast-furnace slag.
- C. Fine Aggregate: ASTM D 1073, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.
  - 1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: In compliance with the latest edition of Maryland State Highway Administration 2022 Standard Specifications for Construction and Materials, Category 900.
- B. Asphalt Cement: In compliance with the latest edition of Maryland State Highway Administration 2022 Standard Specifications for Construction and Materials, Category 900.
- C. Tack Coat: In compliance with the latest edition of Maryland State Highway Administration 2022 Standard Specifications for Construction and Materials, Category 900.
- D. Water: Potable.

2.3 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by the EPA, and not classified as "restricted use" for locations and conditions of application. Provide in granular, liquid, or wettable powder form.
- B. Sand: ASTM D 1073 Grade No. 2 or No. 3



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- C. Paving Geotextile: AASHTO M 288 paving fabric, nonwoven polypropylene: resistant to chemical attack, rot, and mildew; specifically designed for paving applications.
- D. Joint sealant: In compliance with the latest edition of Maryland State Highway Administration 2022 Standard Specifications for Construction and Materials, Category 900.

2.4 MIXES

- A. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction; designed according to procedures in AI MS-2, "Asphalt Mix Design Methods"; and complying with the following requirements:
  - 1. Provide Superpave mixes (based on 0.3 to 3M ESALs) that are approved by MDOT SHA.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protection: Provide protective materials, procedures and worker training to prevent asphalt materials from spilling, coating or building up on curbs, driveway aprons, manholes of other surfaces adjacent to the work.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- C. Proof-roll with a loaded 10-wheel, tandem axle truck weighing not less than 15 tons.
- D. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, and replace with compacted backfill as directed.

3.2 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
  - 1. Mill to a depth of 4 inches
  - 2. Mill to a uniform finished surface free of excessive gouges, grooves and ridges.
  - 3. Repair or replace curbs, driveway aprons, manholes or other construction damaged during cold milling.
  - 4. Excavate and trim unbound aggregate base course, if encountered, and keep material separate from milled hot-mix asphalt.
  - 5. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.
  - 6. Keep milled pavement free of loose material and dust.
  - 7. Do not allow milled materials to accumulate on site.

## PATCHING

- B. Asphalt Pavement: Saw cut perimeter of rear lot to be replaced and excavate existing pavement section to sound base. Excavate entire area unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- C. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
  - 1. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new subgrade.
- D. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd.
  - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- E. Placing Patch Material: Fill excavated pavement areas with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact flush with adjacent surface.

## 3.3 SURFACE PREPARATION

- A. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.
  - 1. Mix herbicide with prime coat if formulated by manufacturer for that purpose.
- C. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
  - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

## 3.4 PLACING HOT-MIX ASPHALT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.

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1. Place hot-mix asphalt base course and binder course in number of lifts and thicknesses indicated on drawings.
  2. Place hot-mix asphalt surface course in single lift.
  3. Spread mix at a minimum temperature of 250 deg F.
  4. Begin applying mix along the centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
  5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

### 3.5 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.
  2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
  3. Offset transverse joints, in successive courses, a minimum of 24 inches
  4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

### 3.6 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
1. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041/D 2041M, but not less than 90 percent or greater than 96 percent.

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- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within
  - 1. Base Course: Plus or minus 1/2 inch
  - 2. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
  - 1. Base Course: 1/4 inch.
  - 2. Surface Course: 1/8 inch.
  - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined in accordance with ASTM D3549/D3549M.
- C. Surface smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerance.
- D. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement in accordance with ASTM D979/D979M.
- E. Replace and compact hot-mix asphalt where core tests were taken.
- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 321216

## SECTION 321313 - CONCRETE PAVING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes Concrete Paving. Including the Following:
  - 1. Driveways.
  - 2. Walks.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each type of product, ingredient, or admixture requiring color selection.
- C. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

#### 1.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
  - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").

#### 1.4 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

### PART 2 - PRODUCTS

#### 2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 unless otherwise indicated.

#### 2.2 CONCRETE MATERIALS

- A. Concrete shall be ultimate strength design with minimum compressive strength at 28 days as indicated on drawings. At slab on grade and where not otherwise indicated, concrete shall be 4,000 p.s.i. minimum. All concrete shall be plant or transit mixed in accordance with ASTM C 94

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and recommendations of National Ready-Mixed Concrete Association. Slump shall be 4" plus or minus one inch (1") with a maximum 6 bags of cement per cubic yard. Provide regionally manufactured and extracted or recovered aggregate.

- B. Exterior walks, ramps, storm structure head walls, paving, and curbs shall be constructed of 4,000p.s.i. air-entrained concrete. Consult drawings for details and locations of items. Where not otherwise indicated, walks shall be constructed of 4 in. thickness with 6x6- W2.1 x W2.1 mesh.
- C. Cement: All cement shall be domestic brand Portland cement conforming with ASTM C-150, Type I or II, and shall be entirely of one manufacturer. Ground granulated blast-furnace slag meeting ASTM C989 or blended hydraulic cement meeting ASTM C-595 shall not be used.
- D. Water: Potable and complying with ASTM C 94/C 94M.

### 2.3 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615; Grade 60; deformed billet steel bars, uncoated finish. Provide regionally manufactured and extracted or recovered steel with 90 percent recycled content including 60 percent post-consumer recycled content.
- B. Welded Steel Wire Fabric: Plain type, ANSI/ASTM A185; in coiled rolls; uncoated finish
- C. Tie Wire: Annealed steel, minimum 16 gauge

### 2.4 ADMIXTURES

- A. Air Entrainment: ASTM C260.
- B. Curing Compound: FS TT-C-800, Type 1, 30% solids, or ASTM C309, white pigmented
- C. Vapor Barrier: 6 mil polyethylene sheeting

### 2.5 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94.
- B. Provide concrete of the following characteristics:
  - 1. Concrete for a compressive strength of 4,000 psi shall contain not fewer than 6 sacks of cement per cubic yard of concrete. Mixing water shall not exceed 6.75 gallons per sack of cement. Fine aggregate range in percent of total aggregate by weight 34-42. The approximate weights of saturated surface-dry aggregates per bag (94 pounds) of cement, fine aggregate (280 pounds) and coarse aggregate (400 pounds).
  - 2. Maximum slump of concrete measured in accordance with ASTM C143, latest issue, shall not exceed 5".
- C. Use accelerating admixtures in cold weather only when approved by the Architect. Use of admixtures will not relax cold weather placement requirements.
- D. Use set-retarding admixtures during hot weather only when approved by the Architect.
- E. Add air entraining agent to concrete mix for all exterior concrete work.

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2.6 EXPANSION JOINTS

- A. Joint Filler: ASTM/ANSI D1751 or D1752, 1/2"
- B. The Expansion Joint Cap and Joint Sealant shall be as manufactured by W. R. Meadows.
- C. Expansion Joint Cap: Snap-Cap, 1/2"
- D. Joint Sealant: Sealtight Gardox, color as selected by Architect
- E. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd. (0.60 kg/cu. m).

2.7 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M[ and ASTM C 1116/C 1116M]. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify compacted subgrade is ready to support paving and imposed loads.
- B. Verify gradients and elevations of base are correct.
- C. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

- A. Subgrade shall be compacted, inspected and tested before placing concrete. Testing of subgrade by an Owner's engaged testing lab.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Place and secure forms to correct location, dimension and profile.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint fillers vertical in position, in straight lines. Secure to formwork during concrete placement.
- D. Align forms to meet existing adjacent lines

3.4 STEEL REINFORCEMENT INSTALLATION

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

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3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, to match jointing of existing adjacent concrete paving:
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
  - 1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
  - 2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.



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3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture-retaining-cover mats.

3.9 FORMED JOINTS

- A. Place expansion, control and contraction joints at 20' intervals, unless noted otherwise, to correct elevation and profile. Align curb, gutter and sidewalk joints.
- B. Place ½" remolded filler joints between paving components and building or other appurtenances.
- C. Provide scored joints at intervals indicated on drawings. If scoring pattern is shown but not dimensioned on plans provide scored pattern in equal spacing.
- D. Tool contraction joints 3/16" wide at an optimum time after finishing. Cut 1/3 into depth of slab.

3.10 FINISHING

- A. Aprons, Paving and Walks: Light broom, perpendicular to direction of traffic.

3.11 REPAIR AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 004323 - ALTERNATES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

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3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: **MACADAM PARKING AREA**

1. ADD Scope of Work for Macadam Parking Area:
  - a. A1.01: Notes 02 and 03 are now under Alternate No.1
  - b. A2.01: Notes 02 and 03 are now under Alternate No.1
  - c. A3.01: Details E1, E13 are now under Alternate No.1

B. Alternate No. 2: **SINK AREA B107**

1. ADD Scope of Work to renovate Sink Area B107:
  - a. A1.01: Detail A14 is now under Alternate No.2
  - b. A4.01: Detail A1, D7, D10 are now under Alternate No.2
  - c. M1.01: Part Plan B is now under Alternate No.2
  - d. M2.10: Part Plan B is now under Alternate No.2

C. Alternate No. 3: **LIGHT FIXTURE REPLACEMENT**

1. ADD Scope of Work for Lighting in Areas B101, B104, B107, B110:
  - a. E1.01: Lighting in B101, B104, B107, B110 is now under Alternate No.3
  - b. E2.01: Lighting in B101, B104, B107, B110 is now under Alternate No.3

END OF SECTION 004323

# HOWARD COUNTY PUBLIC SCHOOL SYSTEM APPLICATIONS AND RESEARCH LABORATORY AUTOMOTIVE LAB RENOVATION

10920 Clarksville Road  
Ellicott City, MD 21042

**ISSUE: BID DOCUMENTS - REVISED FINAL**  
**DATE: 06.21.2023**

## DRAWING LIST

CS	COVER SHEET
A0.01	PROJECT NOTES, ABBREVIATIONS AND CODE ANALYSIS
A1.01	FIRST FLOOR DEMOLITION PLAN
A1.02	REFLECTED CEILING DEMOLITION PLAN
A2.01	FIRST FLOOR NEW WORK PLAN
A2.02	REFLECTED CEILING NEW WORK PLAN & ROOF PLAN
A3.01	EXTERIOR ELEVATIONS, WALL SECTIONS, DETAILS
A4.01	PARTIAL PLANS, MILLWORK DETAILS, SCHEDULES
S0.01	GENERAL NOTES AND TYP. DETAILS - STRUCTURAL
S1.01	PARTIAL PLANS AND SECTIONS - STRUCTURAL
M1.01	FIRST FLOOR DEMOLITION PLAN - MECHANICAL
M1.02	ROOF DEMOLITION PLAN - MECHANICAL
M2.01	FIRST FLOOR NEW WORK PLAN - MECHANICAL
M2.02	ROOF NEW WORK PLAN - MECHANICAL
M4.01	DETAILS
M5.01	MECHANICAL SCHEDULES
M6.01	MECHANICAL SCHEDULES
M7.01	MECHANICAL SPECIFICATIONS
M7.02	MECHANICAL SPECIFICATIONS
E0.01	SYMBOLS, DIAGRAMS, DETAILS AND SCHEDULE - ELECTRICAL
E1.01	FIRST FLOOR DEMOLITION PLAN - ELECTRICAL
E2.01	FIRST FLOOR NEW WORK PLAN - ELECTRICAL
E7.01	ELECTRICAL SPECIFICATIONS
E7.02	ELECTRICAL SPECIFICATIONS

### KEY PLAN

NO	REVISION / SUBMISSION	DATE
1	75% CONSTRUCTION DOCUMENTS	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023

**P. 1982**  
**SM+P**  
ARCHITECTS  
SCHAMU MACHOWSKI + PATTERSON ARCHITECTS, INC.  
1100 CATHEDRAL STREET, BALTIMORE, MD 21201  
TEL 410-685-3582 WWW.SMP-ARCHITECTS.COM


**CONSULTANTS**  
**STRUCTURAL**  
COLUMBIA ENGINEERING  
6210 OLD DOBBIN LANE, SUITE 150  
COLUMBIA, MD. 21045

**MEP**  
JAMES POSEY ASSOCIATES  
1155 RED RUN BLVD.  
OWINGS MILLS, MD. 21117

Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland. License No. 3715R, expiration date: 05.02.2024."

**PROJECT**  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKVILLE PIKE, ELLICOTT CITY, MD. 21042

**DRAWING TITLE**  
COVER SHEET

SEAL	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	<b>CS</b>
	REVIEWED		
	DATE	03/28/2023	
	SCALE		

## OWNER

HCPSS  
SCHOOLCONSTRUCTION  
9020 MENDENHALL COURT  
SUITE C  
COLUMBIA, MD 21045  
PHONE: 410-313-7084

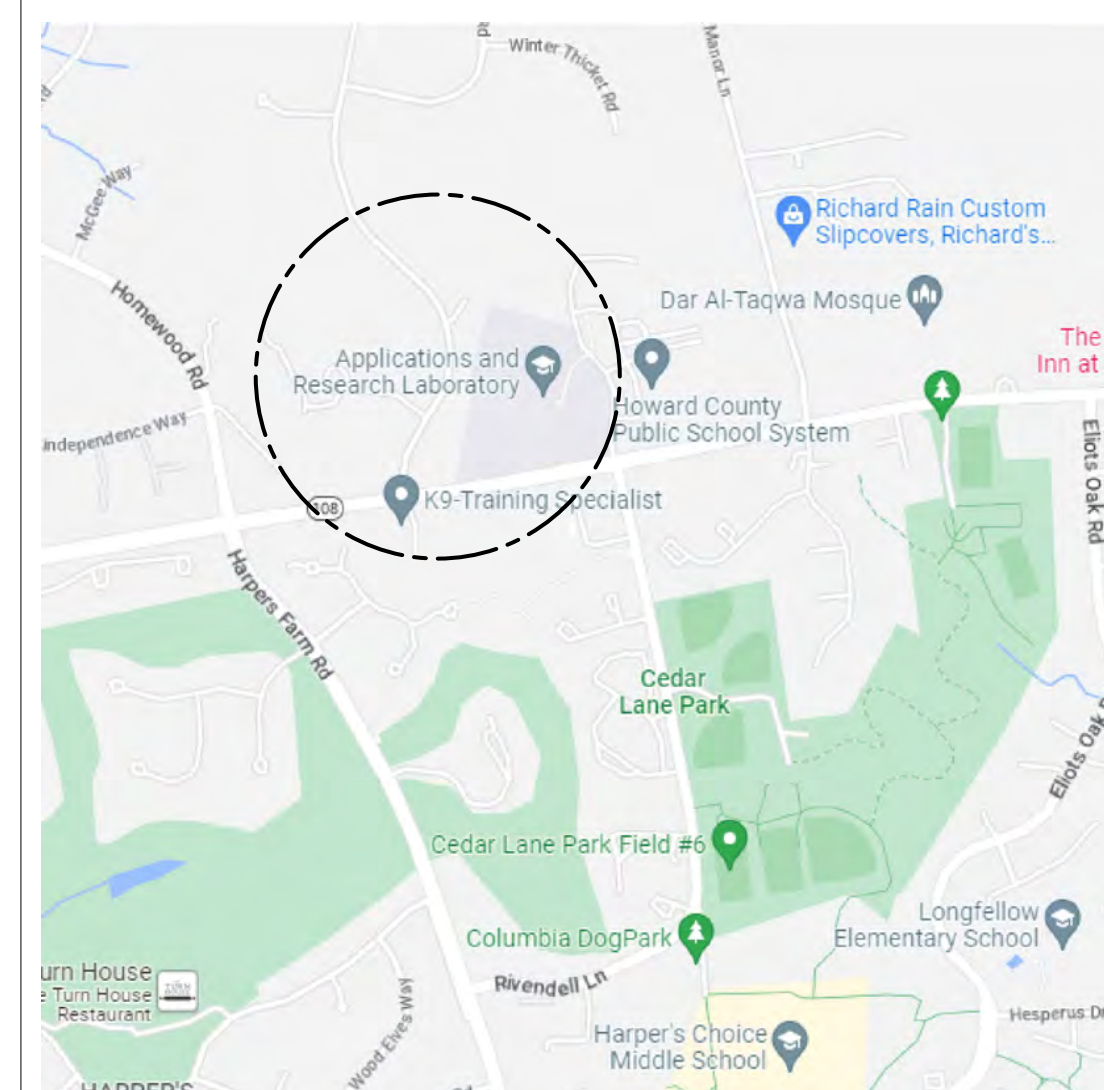
## PROJECT TEAM

**ARCHITECT**  
SM+P ARCHITECTS, INC.  
1100 CATHEDRAL STREET  
BALTIMORE, MD 21201  
PHONE: 410-685-3582

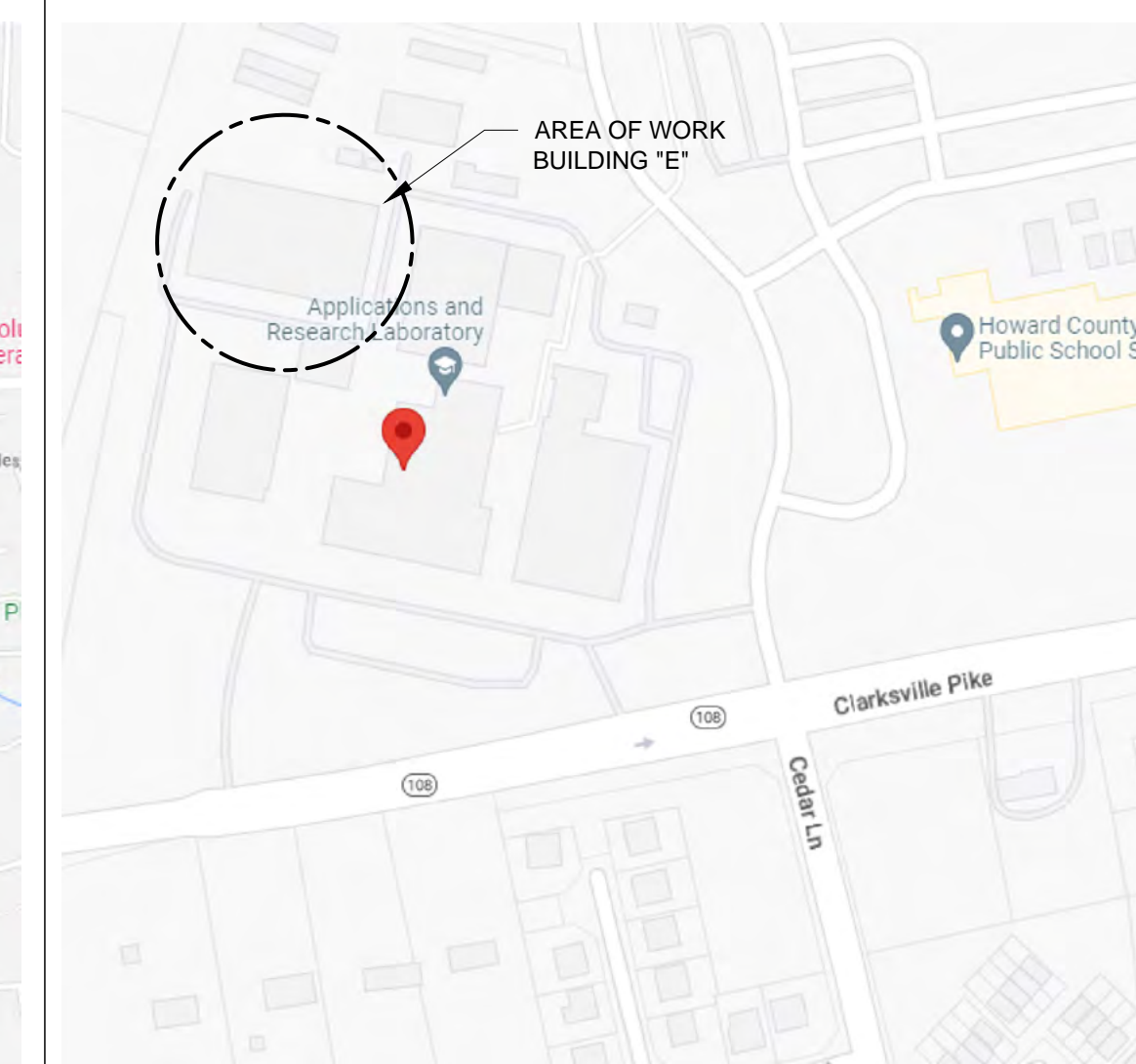
**STRUCTURAL ENGINEER**  
COLUMBIA ENGINEERING, INC  
6210 OLD DOBBIN LANE  
COLUMBIA, MD. 21045  
PHONE: 410-992-9970

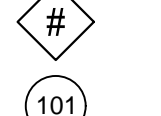
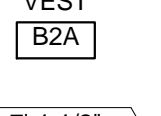
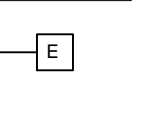

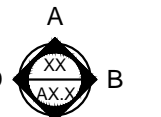

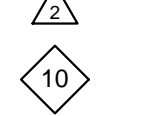



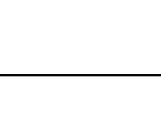

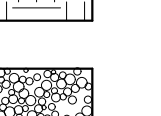
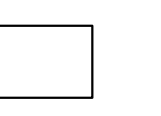
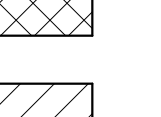
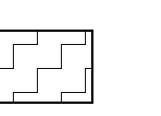

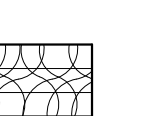
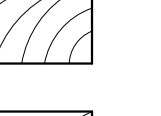
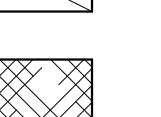
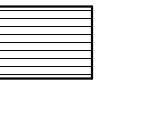
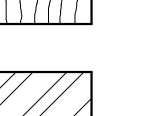
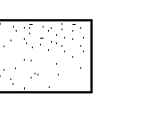
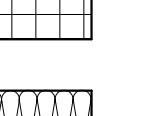
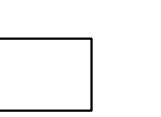
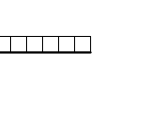
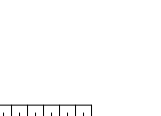




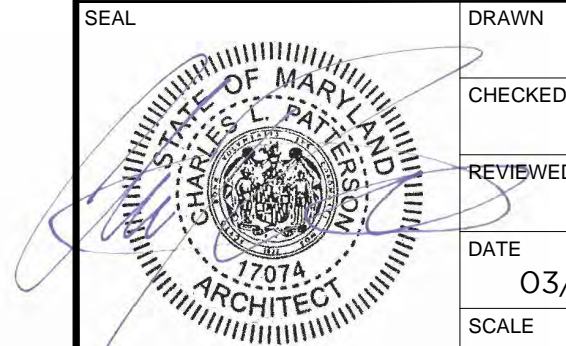
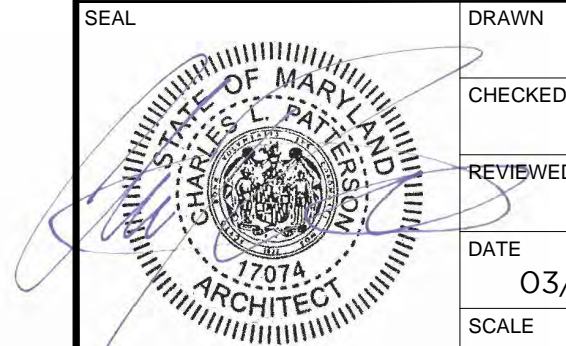
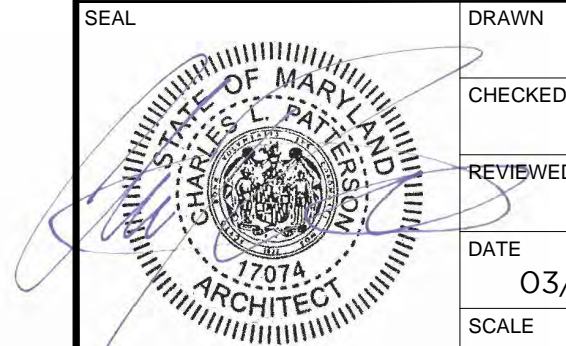
**MECHANICAL, ELECTRICAL,  
PLUMBING & FIRE  
PROTECTION ENGINEER**  
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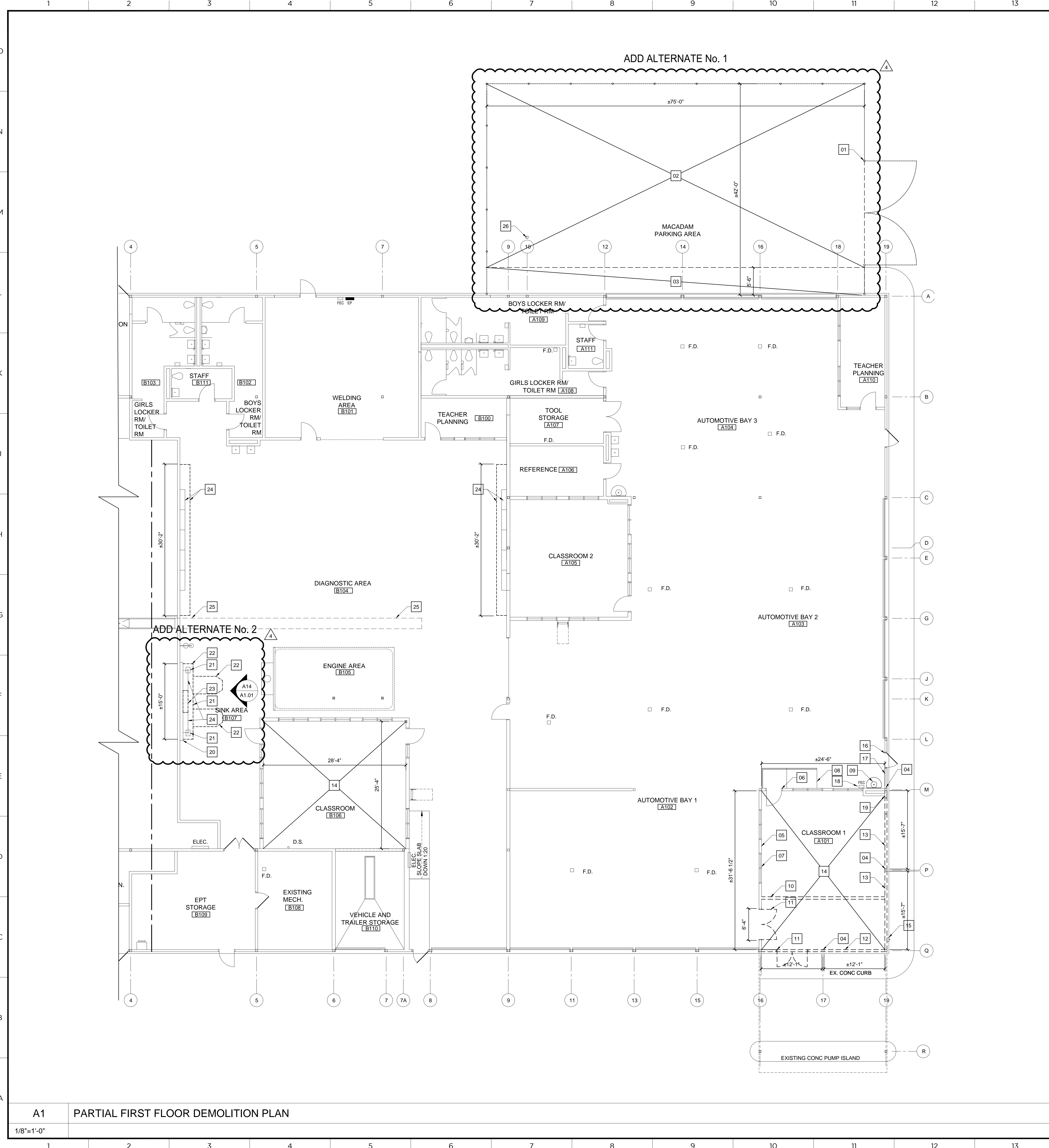
## VICINITY MAP



## LOCATION MAP



ABBREVIATIONS		SYMBOL KEY		GENERAL NOTES AND CONDITIONS		DEMOLITION NOTES		CODE ANALYSIS																																																						
<p><b>ABBREVIATIONS</b></p> <p> <b>AF</b> ABOVE FINISH FLOOR  <b>AC</b> ACOUSTICAL(A)  <b>ACB</b> ACOUSTICAL BAFFLE  <b>ACT</b> ACOUSTICAL TILE  <b>AC DR</b> ACCESS DOOR  <b>AC PNL</b> ACOUSTICAL PANEL  <b>AC WP</b> ACOUSTICAL WALL PANEL  <b>ADH</b> ADHESIVE  <b>ADJ</b> ADJUSTABLE  <b>AFS</b> ABOVE FLOOR SLAB  <b>AC</b> AIR CONDITIONING  <b>AHU</b> AIR HANDLING UNIT  <b>ALUM</b> ALUMINUM  <b>ALT</b> ALTERNATE  <b>ANCH</b> ANCHOR  <b>&amp; AND</b>  <b>APPROX</b> APPROXIMATE  <b>ARCH</b> ARCHITECTURAL  <b>ASP</b> ASPHALT  <b>@</b> AT  <b>AVG</b> AVERAGE  <b>BC</b> BOTTOM CURB  <b>BM</b> BEAM  <b>BRG</b> BEARING  <b>BP</b> BEARING PLATE  <b>BET</b> BETWEEN  <b>BFPM</b> BEVELED FRAME FLOOR MAT  <b>BIT</b> BITUMINOUS  <b>BLKG</b> BLOCKING  <b>BD</b> BOARD  <b>BTM</b> BOTTOM  <b>BW</b> BOTH WAYS  <b>BRKT</b> BRACKET  <b>BRK</b> BRICK  <b>BUR</b> BUILT-UP ROOFING  <b>BLDG</b> BUILDING  <b>BLKHD</b> BULKHEAD  <b>CAB</b> CABINET  <b>CP</b> CARPET  <b>CI</b> CAST IRON  <b>CLG</b> CAULKING  <b>CLG</b> CEILING  <b>CEM</b> CEMENT  <b>C</b> CENTER LINE  <b>CER</b> CERAMIC  <b>CT</b> CERAMIC TILE  <b>CBD</b> CHALKBOARD  <b>C</b> CHANNEL  <b>CR</b> CLASSROOM  <b>CO</b> CLEANOUT  <b>CLR</b> CLEAR, COLOR  <b>CL</b> CLOSET, CENTER LINE  <b>COL</b> COLUMN  <b>COMB</b> COMBINATION  <b>COMP</b> COMPACT(ED)  <b>CONC</b> CONCRETE  <b>CMU</b> CONCRETE MASONRY UNITS  <b>CONST</b> CONSTRUCTION  <b>CONT</b> CONTINUOUS  <b>CLL</b> CONTRACT LIMIT LINE  <b>CJ</b> CONTROL JOINT  <b>CG</b> CORNER  <b>CG</b> CORNER GUARD  <b>CORR</b> CORRIDOR  <b>CTR</b> COUNTER  <b>CLST</b> CLOSET  <b>CSK</b> COUNTERSUNK  <b>CVG</b> CLEAR VERTICAL GRAIN  <b>DP</b> DAMPROOFING  <b>DEPT</b> DEPARTMENT  <b>DET</b> DETAIL  <b>DIAG</b> DIAGONAL(Y)  <b>DIAM</b> DIAMETER  <b>DIM</b> DIMENSION  <b>DISP</b> DISPENSER  <b>DR</b> DIVISION  <b>DBL</b> DOUBLE  <b>DH</b> DOUBLE HUNG  <b>DN</b> DOWN  <b>DS</b> DOWNSPOUT  <b>DWG</b> DRAWING  <b>DF</b> DRINKING FOUNTAIN  <b>EA</b> EACH  <b>E</b> EAST  <b>E</b> EACH END  <b>ELEC</b> ELECTRICAL  <b>EWC</b> ELECTRIC WATER COOLER  <b>EL</b> ELEVATION  <b>ELEV</b> ELEVATOR  <b>EN</b> ENAMEL  <b>ENCL</b> ENCLOSURE  <b>ENT</b> ENTRANCE  <b>EQ</b> EQUAL  <b>EQUIP</b> EQUIPMENT  <b>EXIST</b> EXISTING  <b>EXP</b> EXPANDED/EXPANSION/  <b>EJ</b> EXPANSION JOINT  <b>EXT</b> EXTERIOR  <b>EXTN</b> EXTENSION  <b>EXTR</b> EXTRUDED  <b>F</b> FAHRENHEIT  <b>FCU</b> FAN COIL UNIT  <b>FIN</b> FINISH  <b>FE</b> FINISH FLOOR ELEVATION  <b>FA</b> FIRE ALARM  <b>FE</b> FIRE EXTINGUISHER  <b>FEC</b> FIRE EXTINGUISHER CABINET  <b>FER</b> FIRE EXTINGUISHER RECESS  <b>FHC</b> FIRE HOSE CABINET  <b>FP</b> FIREPROOFING  <b>FLG</b> FLASHING  <b>FL</b> FLOOR  <b>FD</b> FLOOR DRAIN  <b>FLUOR</b> FLUORESCENT  <b>FP PTN</b> FOLDING PANEL PARTITION  <b>FT</b> FOOT OR FEET  <b>FTG</b> FOOTING  <b>FDN</b> FOUNDATION  <b>FS</b> FULL SIZE  <b>FURR</b> FURRING  <b>GALV</b> GALVANIZED  <b>GI</b> GALVANIZED IRON  <b>GA</b> GAUGE  <b>GEN</b> GENERAL  <b>GL</b> GLASS/GLAZING  <b>GB</b> GRAB BAR  <b>GR</b> GRADE  <b>GYP</b> GYPSUM  <b>GWB</b> GYPSUM WALLBOARD  <b>HC</b> HANDICAPPED, HOLLOW CORE  <b>HDR</b> HANDRAIL  <b>HDW</b> HARDWARE  <b>HDWD</b> HARDWOOD  <b>HHT</b> HEIGHT  <b>HTG</b> HEATING, VENTILATING,  <b>HVC</b> COOLING  <b>HP</b> HIGH POINT, HIGH PRESSURE  <b>HC</b> HOLLOW CORE  <b>HM</b> HOLLOW METAL  <b>HOR</b> HORIZONTAL  <b>HB</b> HOSE BIBB  <b>HR</b> HOUR  <b>HU</b> HEATING (AND/OR AC) UNIT  <b>INC</b> INCOMPLETE  <b>INCL</b> INCLUDE  <b>ID</b> INSIDE DIAMETER  <b>INSUL</b> INSULATION  <b>IRMA</b> INSULATED ROOF MEMBRANE ASSEMBLY  <b>INT</b> INTERIOR  <b>JT</b> JOINT  <b>JST</b> JOIST  <b>JOH</b> JAMB OVERALL HEIGHT  <b>JOW</b> JAMB OVERALL WIDTH  <b>KVO</b> KNOCK OUT  <b>LAM</b> LAMINATE(D)  <b>LAV</b> LAVATORY  <b>LF</b> LINEAR FOOT (FEET)  <b>LT WT</b> LIGHT WEIGHT  <b>LP</b> LOW POINT, LOW PRESSURE  <b>LVR</b> LOUVER  <b>L</b> LOCKER  <b>MACH</b> MACHINE  <b>MFRGR</b> MANUFACTURER  <b>MB</b> MARKER BOARD  <b>MAS</b> MASONRY  <b>MO</b> MASONRY OPENING  <b>MAT</b> MATERIAL  <b>MAX</b> MAXIMUM  <b>MECH</b> MECHANICAL  <b>MEMB</b> MEMBRANE  <b>MTL</b> METAL  <b>MTP</b> METAL TOILET PARTITION  <b>MEZZ</b> MEZZANINE  <b>MIN</b> MINIMUM  <b>MR</b> MIRROR  <b>MISC</b> MISCELLANEOUS  <b>MB</b> MOISTURE BARRIER  <b>MTD</b> MOUNTED  <b>MULL</b> MULLION  <b>NF</b> NATURAL FINISH  <b>N</b> NORTH  <b>NTD</b> NOTED  <b>NC</b> NOT IN CONTRACT  <b>NCS</b> NOT TO SCALE  <b>NO</b> NUMBER  <b>NOM</b> NOMINAL  <b>OFF</b> OFFICE  <b>OC</b> ON CENTER  <b>OPG</b> OPENING  <b>OPP</b> OPPOSITE  <b>OH</b> OPPOSITE HAND  <b>OD</b> OUTSIDE DIAMETER  <b>OA</b> OVERALL  <b>PT</b> PAINT  <b>PTD</b> PAINTED  <b>PR</b> PAIR  <b>PNL</b> PANEL  <b>PTDP</b> PAPER TOWEL DISPENSER  <b>PTR</b> PAPER TOWEL RECEPTACLE  <b>PB</b> PARTIAL BOARD  <b>PTN</b> PARTITION  <b>PVG</b> PAVING  <b>PERF</b> PERFORATE(D)  <b>PSF</b> PER SQUARE FOOT  <b>PSI</b> PER SQUARE INCH  <b>PLAS</b> PLASTER  <b>PLAM</b> PLASTIC LAMINATE  <b>PLATE</b> PLATE  <b>POL</b> POLISHED  <b>PLYWD</b> PLYWOOD  <b>PS</b> PROJECTION SCREEN  <b>PVA</b> POLYVINYL ACETATE  <b>PVC</b> POLYVINYL CHLORIDE  <b>PE</b> PORCELAIN ENAMEL  <b>PF</b> POROUS FILL  <b>PRECAST</b> PRECAST  <b>PS</b> PROJECTION SCREEN  <b>QT</b> QUARRY TILE  <b>RAD</b> RADIUS  <b>RISER</b> RISER  <b>R</b> RADIANT HEAT PANEL  <b>RL</b> RAIN LEADER  <b>RFM</b> RECESSED FLOOR MAT  <b>RFL</b> REFLECTED(LINE/VE)OR  <b>REG</b> REGISTER  <b>REINF</b> REINFORCEMENT(ING)  <b>RH</b> RELATIVE HUMIDITY  <b>REQD</b> REQUIRED  <b>RES</b> RESILIENT  <b>RT</b> RESILIENT TILE  <b>RET</b> RETURN  <b>RA</b> RETURN AIR  <b>RF</b> ROOF  <b>RFG</b> ROOFING  <b>RD</b> ROOF DRAIN  <b>RM</b> ROOM  <b>RO</b> ROUGH OPENING  <b>RND</b> ROUND  <b>RBR</b> RUBBER  <b>RT</b> RUBBER TILE  <b>SND</b> SANITARY NAPKIN DISPENSER  <b>SNR</b> SANITARY NAPKIN RECEPTACLE  <b>SCHED</b> SCHEDULE  <b>STG</b> SEATING  <b>SEC</b> SECTION  <b>SH</b> SHEET  <b>SM</b> SHEET METAL  <b>SHLVG</b> SHELVE  <b>SHR</b> SHOWER  <b>SIM</b> SIMLAR  <b>SL</b> SLATE  <b>SD</b> SOAP DISPENSER, STORM DRAIN  <b>SC</b> SOUTH  <b>SAB</b> SOUND ATTENUATION BLANKET  <b>SP</b> SPANDREL  <b>SPFC</b> SPECIFICATION(S)  <b>SP CMU</b> SPLIT FACE CMU  <b>SO</b> SQUARE  <b>SS</b> STAINLESS STEEL  <b>STANDARD</b> STANDARD  <b>STDFRONT</b> STOREFRONT  <b>STL</b> STEEL  <b>STR</b> STRUCTURAL  <b>SGT</b> STRUCTURAL GLAZED TILE  <b>SUBFL</b> SUBFLOOR  <b>SUSP</b> SUSPENDED  <b>SYM</b> SYMMETRICAL  <b>SYS</b> SYSTEM  <b>TEL</b> TELEPHONE  <b>TEMP</b> TEMPERED  <b>TER</b> TERRA COTTA or TOP CURB  <b>TER</b> TERRAZZO  <b>THK</b> THICK(NESS)  <b>THR</b> THRESHOLD  <b>TP</b> TOILET PAPER DISPENSER  <b>T&amp;G</b> TONGUE &amp; GROOVE  <b>TF</b> TOP OF FOOTING  <b>TS</b> TOP OF STEEL  <b>TW</b> TOP OF WALL  <b>TWB</b> TOWEL BAR  <b>T</b> TREAD  <b>TYP</b> TYPICAL  <b>UL</b> UNDERWRITER'S LABS/  <b>UND</b> UNDERLAYMENT  <b>UNF</b> UNFINISHED  <b>UNF</b> UNLESS OTHERWISE NOTED  <b>URINAL</b> URINAL  <b>US</b> URINAL SCREEN  <b>UV</b> UNIT VENTILATOR  <b>UTS</b> UTILITY SHELF  <b>VB</b> VINYL BASE  <b>VERT</b> VERTICALLY  <b>VEST</b> VESTIBULE  <b>VCT</b> VINYL COMPOSITION TILE  <b>VVC</b> VINYL WALL COVERING  <b>WSCT</b> WAINSCOT  <b>WH</b> WALL HYDRANT  <b>WC</b> WATER CLOSET/WATER COOLER  <b>WP</b> WATERPROOF  <b>WT</b> WEIGHT  <b>WWF</b> WELDED WIRE FABRIC  <b>W</b> WEST/WIDE/WIDTH  <b>W</b> WITH  <b>W/O</b> WITHOUT  <b>WD</b> WOOD  <b>WP</b> WORKING POINT  <b>WB</b> WHITE BOARD </p>	<p><b>SYMBOL KEY</b></p> <p>  CONSTRUCTION KEY NOTE   DOOR MARKER   ROOM NAME / ROOM NUMBER   CEILING HEIGHT / CEILING FINISH TYPE   PARTITION TYPE   DETAIL NUMBER / SHEET NUMBER   DATUM ELEVATION   INTERIOR ELEVATION NO. (MULTIPLE VIEW) SHEET NUMBER   SECTION DETAIL / DETAIL NUMBER / SHEET NUMBER   REVISION NUMBER   WINDOW TYPE   ADA ACCESSIBLE   EARTH   GRAVEL FILL   CONCRETE   CONCRETE BLOCK (CMU)   BRICK   STRUCTURAL GLAZED TILE   MARBLE   PLYWOOD   PARTICLE BOARD (HARDBOARD)   FINISH WOOD   WOOD FRAMING/BLOCKING   CEMENTITIOUS WOOD FIBER   GLASS (LARGE SCALE)   CERAMIC TILE   STEEL (LARGE SCALE)   PLASTER/MORTAR / CUTSTONE/GYPSUM BOARD   RIGID INSULATION   BLANKET INSULATION   SPRAY FOAM INSULATION   RESILIENT FLOORING   CARPET &amp; PAD   ACOUSTICAL TILE OR BOARD </p>	<p><b>GENERAL NOTES AND CONDITIONS</b></p> <ol style="list-style-type: none"> <li>ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, REGULATIONS AND REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT.</li> <li>CONTRACTOR SHALL VERIFY ACCURACY OF ALL EXISTING DIMENSIONS AND PROMPTLY REPORT ANY DISCREPANCIES TO THE ARCHITECT. FAILURE TO DO SO WILL NOT RELIEVE THEM OF THE RESPONSIBILITY FOR CARRYING OUT AND ALL WORK SHOWN, NOTED, OR SPECIFIED.</li> <li>THE INTENT OF THESE DRAWINGS IS FOR THE CONTRACTOR TO PROVIDE ALL LABOR, MATERIAL, FINISHES, EQUIPMENT, INSTALLATION AND SERVICES NECESSARY FOR THE WORK TO PROVIDE THE OWNER WITH A COMPLETE PROJECT INCLUSIVE OF ALL SYSTEMS.</li> <li>ACTUAL FIELD CONDITIONS MAY VARY FROM THOSE INDICATED IN THESE DRAWINGS. SHOULD ACTUAL CONDITIONS DIFFER MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE CONSTRUCTION MANAGER BEFORE CONDITIONS ARE DISTURBED. FAILURE TO DO SO MAY WAIVE THE CONTRACTOR'S RIGHT TO RECEIVE ADDITIONAL TIME OR CONSIDERATION DUE TO SUCH CONDITIONS.</li> <li>PRIOR TO INITIATING ANY PORTION OF THE WORK, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE ALL PORTIONS OF THE CONTRACT DOCUMENTS RELATING TO THAT PORTION OF THE WORK AND AFFECTING OTHER AREAS. IF DISCREPANCIES EXIST THEY SHALL BE REPORTED TO THE CONSTRUCTION MANAGER FOR CLARIFICATION AND/OR RESOLUTION BEFORE COMMENCING SUCH WORK. VERIFYING EXISTING CONDITIONS INCLUDES CHECKING ABOVE ACOUSTICAL CEILING FOR CODE COMPLIANCE OF EXISTING FIRE DAMPERS, PROPER PLENUM MATERIALS, AND OTHER ITEMS WHICH MAY DELAY FINAL INSPECTIONS.</li> <li>BY SUBMITTING A BID PROPOSAL, THE CONTRACTOR CERTIFIES THAT THEY HAVE VISITED THE SITE AND UNDERSTAND THE COMPLETE SCOPE OF WORK WHICH IS INCLUDED IN THE CONTRACT DOCUMENTS.</li> <li>UNLESS NOTED OTHERWISE, NUMBERED DIMENSIONS SHOWN ON DRAWINGS TAKE PRECEDENCE OVER SCALED DRAWINGS. DETAIL DRAWINGS TAKE PRECEDENCE OVER GENERAL DRAWINGS. IF CONFLICT EXISTS ON THE DRAWINGS THEN THE MORE STRINGENT REQUIREMENT SHALL APPLY. FINAL INTERPRETATION SHALL BE MADE BY THE ARCHITECT.</li> <li>SAMPLES AND SHOP DRAWINGS MUST BE SUBMITTED BY THE CONTRACTOR TO THE CONSTRUCTION MANAGER FOR REVIEW AND PROCESSING BEFORE THE PURCHASE OR FABRICATION OF ANY MATERIALS.</li> <li>DIMENSIONS OF EXISTING OPENINGS SHALL BE VERIFIED PRIOR TO PREPARATION OF SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE A SCHEDULE OF ACTUAL OPENING DIMENSIONS AS VERIFIED IN THE FIELD.</li> <li>DURING THE WORK, ANY CONDITION UNCOVERED THAT CAUSED CONFLICT WITH THE INTENDED DESIGN MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER.</li> <li>CONTRACTOR SHALL STAGE WORK IN SUCH A WAY AS TO ENSURE SAFE EMERGENCY EGRESS AT ALL TIMES.</li> <li>EXCEPT FOR PREFINISHED SURFACES, ALL ITEMS DISTURBED OR DAMAGED BY WORK SHALL BE REFINISHED TO MATCH ADJACENT SURFACES OR FINISHED AS INDICATED.</li> <li>REPAIRED AND NEW AREAS OF WALLS OR CEILINGS SHALL BE BLENDED AND FEATHERED INTO THE SURROUNDING AREA. THERE SHALL NOT BE ANY VISIBLE SEAMS OR CHANGE IN APPEARANCE BETWEEN THE REPAIRED OR NEW AREA AND THE SURROUNDING AREA.</li> <li>ALL NEW AND EXISTING HOLES AND PENETRATIONS IN WALLS AND CEILING SURFACES SHALL BE PATCHED AND FIRE STOPPED.</li> <li>BEFORE COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST COORDINATE DEMOLITION WITH PROPOSED WORK AND OTHER DISCIPLINES.</li> <li>COORDINATE ROOF WORK WITH THE OWNER AND THE OWNER'S WARRANTED ROOFING CONTRACTOR, SO AS NOT TO VOID THE BUILDING'S ROOF WARRANTY. ALL ROOFING SHALL BE WATER TIGHT AND IN ACCORDANCE WITH THE NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) ROOFING AND WATERPROOFING MANUAL, LATEST EDITION.</li> <li>THE ARCHITECT SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS IN ANY FORM ON THE PROJECT SITE. CONTRACTOR TO NOTIFY THE CONSTRUCTION MANAGER IF THESE ITEMS ARE APPARENT OR SUSPECTED.</li> <li>ANY ALTERATION TO THE STRUCTURE (SUCH AS CORE DRILLING) SHALL BE COORDINATED.</li> <li>OPERATIONS WHICH INVOLVE EXCESSIVE NOISE SHALL BE COORDINATED WITH THE SCHOOL, TO BE PERFORMED DURING NON-SCHOOL HOURS.</li> <li>WHENEVER EXISTING CEILINGS AND WALLS ARE INDICATED TO REMAIN, THEY SHALL BE PREPARED FOR REFINISHING. ABANDONED ATTACHMENTS, FASTENERS, FIXTURES, ETC SHALL BE REMOVED BEFORE FINISHING OPERATIONS ARE COMPLETED. SURFACES SHALL BE CLEANED AND FREE OF DUST, DIRT, LOOSE MATERIALS, AND ANY OTHER MATERIALS WHICH MIGHT ADVERSELY AFFECT THE PROPER INSTALLATION OF NEW FINISHES. NEW AND EXISTING HOLES, CRACKS, ETC. SHALL BE PATCHED, FILLED AND SANDED FLUSH AND SMOOTH WITH ADJACENT SURFACES. LOOSE PAINT SHALL BE SCRAPED BACK TO SOLID MATERIAL AND EDGES SHALL BE FEATHERED TO BLEND WITH ADJACENT SURFACES. EXISTING PANELING, WALL COVERINGS, ETC. SHALL BE COMPLETELY REMOVED AND SURFACE PREPARED FOR NEW FINISH AS INDICATED ABOVE. INK MARKS, STAINS, SPECIAL PAINTS, AND OTHER MATERIALS WHICH MIGHT BLEED THROUGH NEW FINISHES SHALL BE SEALED PRIOR TO APPLICATION OF FINISH.</li> <li>ALL PREVIOUSLY PAINTED SURFACES INDICATED TO REMAIN, INCLUDING DOORS, FRAMES, WINDOWS, TRIM, ETC. SHALL BE PREPARED AND REPAINTED. DOORS AND WINDOW SASH SHALL BE TEMPORARILY REMOVED AND REINSTALLED AFTER PAINTING IS COMPLETE. ABANDONED HARDWARE AND FASTENERS SHALL BE REMOVED. HOLES SHALL BE FILLED AND SANDED SMOOTH EXCEPT MOUNTING HOLES FOR HARDWARE TO BE REINSTALLED. SURFACES SHALL BE CLEANED FREE OF DIRT, DUST OR OTHER MATERIALS WHICH WOULD ADVERSELY AFFECT THE APPEARANCE OF NEW FINISH. LOOSE PAINT AND RUST SHALL BE SANDED OR SCRAPED BACK TO SOLID MATERIAL AND EDGES FEATHERED TO BLEND.</li> <li>UNLESS OTHERWISE INDICATED, ALL PIPING, CONDUIT, DUCTWORK AND SIMILAR SERVICES SHALL BE CONCEALED.</li> <li>GENERAL NOTES, APPLY TO ALL DRAWINGS RELATED TO THE PROJECT. CONSTRUCTION NOTES (OR KEY NOTES) REFER TO ITEMS NOTED WITH NUMBERS OR LETTER DESIGNATIONS ON THE RESPECTIVE DRAWINGS THERE THE DESIGNATIONS ARE SHOWN.</li> <li>COORDINATE ALL NEW WORK, SYSTEMS, AND OTHER UTILITIES TO PROVIDE FULL FUNCTIONALITY. NOTIFY ARCHITECT PROMPTLY OF ANY CONFLICTS.</li> <li>PROVIDE TEMPORARY CONSTRUCTION BARRIERS / DUST PARTITIONS AS REQUIRED IN AREAS TO BE DEMOLISHED, TO MAINTAIN INDOOR AIR QUALITY. CLOSE ALL VOIDS IN PARTITION THAT FORM CONSTRUCTION/NON-CONSTRUCTION BOUNDARY BEFORE BEGINNING WORK. MAINTAIN ALL REQUIRED EXIT WAYS DURING CONSTRUCTION.</li> <li>WHERE "EXISTING CONSTRUCTION TO BE REMOVED" IS DEMOLISHED FROM "CONSTRUCTION TO REMAIN", PATCH, FILL HOLES, CLEAN PREPARE, PRIME AND APPLY NEW FINISH. COMPLETED WORK IS TO BE INDISTINGUISHABLE FROM ADJACENT WORK. THIS APPLIES TO ALL FLOORS, WALLS, ETC.</li> </ol>	<p><b>DEMOLITION NOTES</b></p> <p>02-41 19 - SELECTIVE DEMOLITION</p> <ol style="list-style-type: none"> <li>DEFINITIONS:       <ol style="list-style-type: none"> <li>REMOVE: REMOVE AND LEGALLY RECYCLE OR DISPOSE OF ITEMS OFFSITE, EXCEPT THOSE ITEMS INDICATED TO BE REINSTALLED.</li> <li>SALVAGE: REMOVE ITEM AND SALVAGE FOR REINSTALLATION, AS FOR "REMOVE AND REINSTALL".</li> <li>REMOVE AND REINSTALL: REMOVE ITEMS INDICATED; CLEAN, SERVICE, AND OTHERWISE PREPARE FOR REUSE; STORE AND PROTECT AGAINST DAMAGE. REINSTALL ITEMS IN THE SAME LOCATIONS OR IN LOCATIONS INDICATED.</li> <li>EXISTING TO REMAIN: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOLID DURING SELECTIVE DEMOLITION.</li> </ol> </li> <li>ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL CODES AND AUTHORITIES.</li> <li>CONTRACTOR IS RESPONSIBLE TO OBTAINING ALL APPLICABLE PERMITS AND LANDFILL FEES.</li> <li>CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL UTILITY COMPANIES AND SCHEDULING DISCONNECTIONS AND RECONNECTION OF SERVICE AS NECESSARY.</li> <li>IF ANY UNUSUAL, UNCOMMON, OR UNANTICIPATED CONDITIONS ARE EXPOSED DURING DEMOLITION NOTIFY THE ARCHITECT IMMEDIATELY.</li> <li>ALL DEMOLITION WORK SHALL BE ACCOMPLISHED IN A MANNER THAT PROTECTS THE EXISTING STRUCTURE TO BE RENOVATED. THIS INCLUDES ALL MASONRY, FLOORING, WALLS, CEILINGS, MILLWORK, AND SYSTEMS TO REMAIN.</li> <li>CONTRACTOR TO SECURE STRUCTURE BEFORE MOVING WALLS BY BRACING OR SHORING WHERE REQUIRED IN A MANNER SAFE FOR WORKERS, INSPECTORS AND THOSE USING THE SITE. NOTIFY ARCHITECT WHEN STRUCTURAL WALLS ARE OPENED.</li> <li>EXISTING STRUCTURE EXPOSED BY DEMOLITION SHALL BE PROTECTED FROM WEATHER AND EXPOSURE WHERE APPLICABLE. THIS INCLUDES TEMPORARY COVERINGS AND BOARDING OF WINDOW OPENINGS.</li> <li>SALVAGE PER OWNER ALL RECYCLABLE / REUSABLE MATERIALS OR ITEMS INCLUDING WINDOWS, DOORS AND JAMBS, GLAZING, BEAMS, LINTELS, COLUMNS, CONNECTORS, LUMBER, PIPING, RADIATORS, VALVES, CABINETS, APPLIANCES, OUTLETS, SWITCHING, LIGHTING, ETC AS INDICATED ON DRAWINGS.</li> <li>EXISTING LIGHTING FIXTURES, WIRE, MOLDING, JUNCTION BOXES, SWITCHED, ETC. INVOLVED IN THE WORK AND SAFELY CAP AND LABEL FOR REUSE. LABEL HOT, GND SWITCH LOCATIONS AND DESTINATIONS AS APPROPRIATE.</li> <li>RECYCLING AND DISPOSAL OF REMOVED MATERIALS SHALL COMPLY WITH CONSTRUCTION WASTE MANAGEMENT AS DESCRIBED IN THESE SPECIFICATIONS.</li> <li>USE REPAIR MATERIALS IDENTICAL TO EXISTING MATERIALS, EXCEPT WHERE SPECIFICATION FOR REPAIR OR REPLACEMENT MATERIALS DIFFER IN THESE DOCUMENTS. USE WATER MIST, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT, AS APPROPRIATE FOR EACH CONDITION. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS.</li> <li>DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. USE METHODS REQUIRED TO COMPLETE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS:       <ol style="list-style-type: none"> <li>NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE, AND TRUE TO DIMENSIONS AS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT HAMMERING AND CHIPPING. TEMPORARILY COVER OPENINGS TO REMAIN, INCLUDING OPENINGS TO HVAC DEVICES AND DUCTWORK.</li> <li>DO NOT USE CUTTING TORCHES OR ANY OTHER OPEN FLAME EQUIPMENT.</li> <li>REMOVE DECAYED, VERMIN-INFESTED, OR OTHERWISE DANGEROUS OR UNSUITABLE MATERIALS AND PROMPTLY DISPOSE OF OFF-SITE.</li> <li>FOR OVERHEAD OR HIGH-ELEVATION WORK INDICATED TO BE REMOVED, INCLUDING STRUCTURAL AND NONSTRUCTURAL ITEMS, CAREFULLY CUT AWAY ITEMS FROM SUPPORTING STRUCTURE USING METHODS PERMITTED AND LOWER TO GROUND BY METHOD SUITABLE TO AVOID FREE FALL AND TO PREVENT GROUND IMPACT OR DUST GENERATION.</li> <li>RETURN ELEMENTS OF CONSTRUCTION AND SURFACES TO REMAIN TO CONDITION EXISTING BEFORE START OF SELECTIVE DEMOLITION OPERATIONS.</li> <li>PROMPTLY PATCH AND REPAIR DAMAGED SURFACES CAUSED TO ADJACENT CONSTRUCTION BY SELECTIVE DEMOLITION OPERATIONS.</li> <li>PROMPTLY REMOVE DEMOLISHED MATERIALS FROM SITE. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE.</li> </ol> </li> <li>ANY DEMOLITION TO EXISTING BUILDING THAT IS NECESSARY TO ACCOMPLISH NEW CONSTRUCTION SHOULD RESULT IN THE AFFECTED AREAS BEING RETURNED TO THE STATE IN WHICH THEY WERE FOUND.</li> <li>USE MATERIAL FOR CUTTING AND PATCHING THAT IS IDENTICAL TO EXISTING MATERIAL SURROUNDING AFFECTED AREAS.</li> <li>RESTORE EXPOSED FINISHES OF PATCHED AREAS AND WHERE NECESSARY EXTEND FINISH RESTORATION INTO ADJOINING WORK TO ELIMINATE EVIDENCE OF PATCHING.</li> <li>USE TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT DEBRIS.</li> <li>REMOVE ALL INDICATED FLOOR COVERINGS INCLUDING FASTENERS, ADHESIVES, ETC. AND PREPARE THE FLOOR SYSTEM TO RECEIVE NEW FINISHES WHERE APPLICABLE.</li> <li>REMOVE ALL INDICATED WALL COVERINGS AND CEILING COVERINGS, AND PREPARE FOR NEW FINISHES.</li> <li>CONTRACTOR TO FULLY INVESTIGATE THE EXISTING BUILDING AS TO THE DEMOLITION NECESSARY TO ACCOMPLISH THE INTENT OF THE NEW RENOVATION. INCLUDE ALL DEMOLITION WORK AND REPAIR NECESSARY TO COMPLETE THE JOB IN THE SCOPE OF THE BID.</li> <li>CONTRACTOR TO LOCATE EXISTING ELECTRIC PANEL, DISCONNECT, REMOVE AND PREP FOR NEW WORK.</li> <li>CONTRACTOR TO REMOVE ALL EXISTING SYSTEMS (HVAC, PLUMBING, ELECTRICAL) THAT ARE NECESSARY TO COMPLETE THE INTENT OF THE JOB.</li> <li>COORDINATE WITH THE OWNER ON THE HAZ-MAT AND LEAD REPORT FOR THE EXTENT AND REMOVAL OF MATERIALS IN AFFECTED AREAS. ALL MATERIALS SHALL BE DISPOSED OF ACCORDING TO FEDERAL AND STATE REGULATIONS.</li> </ol> <p>END OF SECTION</p>	<p><b>CODE ANALYSIS</b></p> <p><b>APPLICATIONS AND RESEARCH LABORATORY CODE ANALYSIS</b>    INTERIOR ALTERATIONS TO EXISTING AUTOMOTIVE FACILITY</p> <p><b>A. APPLICABLE CODES</b></p> <ol style="list-style-type: none"> <li>BUILDING CODES - 2021 IBC</li> <li>MECHANICAL CODES - 2021 IMC</li> <li>PLUMBING CODES - 2021 NATIONAL STANDARD PLUMBING CODE</li> <li>ELECTRICAL CODES - 2021 NEC</li> <li>ENERGY CONSERVATION CODES - 2021 IECC</li> <li>LIFE SAFETY CODE - 2021 NFPA 101 LIFE SAFETY CODE</li> <li>ACCESSIBILITY CODES - 2010 ADA STANDARDS</li> </ol> <p><b>B. BUILDING USE / CONSTRUCTION CLASSIFICATION:</b></p> <ol style="list-style-type: none"> <li>EXISTING USE GROUP: E - EDUCATION      PROPOSED USE GROUP: NO CHANGE</li> <li>TYPE OF CONSTRUCTION:      EXISTING: TYPE II B      PROPOSED: NO CHANGE</li> <li>BUILDING HEIGHT AND AREA LIMITATIONS:      (IBC T504.3, IBC T504.4, &amp; IBC T506.2)      TYPE II B CONSTRUCTION, USE GROUP E      ALLOWABLE HEIGHT.....3 STORIES / 75 FEET (ABOVE GRADE)      ALLOWABLE AREA.....58,000 SF (SINGLE STORY)      ACTUAL HEIGHT.....1 STORY / 22 FEET      ACTUAL AREA.....29,100 SF      PROPOSED: NO CHANGE</li> </ol> <p><b>C. FIRE RESISTIVE RATING (IBC T601)</b></p> <ol style="list-style-type: none"> <li>PRIMARY STRUCTURAL FRAME.....0</li> <li>BEARING WALLS (EXTERIOR).....0      (INTERIOR).....0</li> <li>NON-BEARING WALLS (INTERIOR).....0</li> <li>FLOOR CONSTRUCTION.....0</li> <li>ROOF CONSTRUCTION.....0</li> <li>EXTERIOR NON-LOAD BEARING WALL FIRE RATINGS (IBC T602)      NORTH.....0      EAST.....0      SOUTH.....0      WEST.....0</li> </ol> <p><b>D. FIRE PROTECTION SYSTEMS:</b></p> <ol style="list-style-type: none"> <li>AUTOMATED SPRINKLER SYSTEM</li> </ol> <p><b>E. MEANS OF EGRESS ANALYSIS:</b></p> <ol style="list-style-type: none"> <li>OCCUPANT LOAD / SQ. FT. PER PERSON (IBC-2021; 1004.1.2):      EDUCATION: UNCHANGED      NUMBER OF EGRESS POINTS: 14      PROPOSED NUMBER OF EGRESS POINTS: NO CHANGE      DOORS (EGRESS WIDTH PER OCCUPANT DOOR):      MINIMUM DOOR OPENING WIDTH (IBC-2021; 1010.1.1)=32" CLEAR</li> </ol> <p><b>F. ENERGY EFFICIENCY</b></p> <ol style="list-style-type: none"> <li>VERTICAL FENESTRATION MAXIMUM U-FACTOR &amp; SHGC REQUIREMENTS (IECC TC402.1.4 &amp; TC402.4)</li> </ol> <table border="1"> <thead> <tr> <th>UFACTOR</th> <th>IECC</th> <th>PROPOSED</th> </tr> </thead> <tbody> <tr> <td>OPAQUE SWINGING DOORS</td> <td>0.61 MAX</td> <td>0.45</td> </tr> <tr> <td>OPERABLE FENESTRATION</td> <td>0.45 MAX</td> <td>0.45</td> </tr> <tr> <td>ENTRANCE DOORS</td> <td>0.77 MAX</td> <td>0.77 MAX</td> </tr> </tbody> </table>	UFACTOR	IECC	PROPOSED	OPAQUE SWINGING DOORS	0.61 MAX	0.45	OPERABLE FENESTRATION	0.45 MAX	0.45	ENTRANCE DOORS	0.77 MAX	0.77 MAX	<p><b>SITE WORK NOTES</b></p> <table border="1"> <thead> <tr> <th>NO</th> <th>REVISION / SUBMISSION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>75% CONSTRUCTION DOCUMENTS</td> <td>2/28/2023</td> </tr> <tr> <td>2</td> <td>100% CONSTRUCTION DOCUMENTS</td> <td>3/28/2023</td> </tr> <tr> <td>3</td> <td>BID DOCUMENTS</td> <td>4/21/2023</td> </tr> <tr> <td>4</td> <td>BID DOCUMENTS - REVISED FINAL</td> <td>6/21/2023</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST (HOWARD COUNTY) DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND DETAILS.</li> <li>EXISTING FEATURES AND UTILITIES SHOWN HAVE BEEN BASED UPON SURVEYS AND OTHER SOURCES BELIEVED TO BE RELIABLE. THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION SHOWN IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY ALL INFORMATION BEFORE COMMENCING WORK.</li> <li>THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF FIVE WORKING DAYS PRIOR TO CONSTRUCTION.</li> <li>THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS.</li> <li>THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES, IF APPLICABLE.</li> <li>NUMERICALLY WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.</li> <li>UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED AT FACE OF CURB.</li> <li>FINISHED GRADES SHALL FALL AWAY FROM EXISTING AND PROPOSED BUILDINGS AT A 1/4-INCH PER FOOT FOR VEGETATED AREAS AND A MINIMUM OF 1/8-INCH PER FOOT FOR PAVED AREAS, UNLESS OTHERWISE INDICATED.</li> <li>THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES, AS NECESSARY. ALL UTILITIES SHALL BE RETAINED UNLESS LABELED OTHERWISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND WORK REQUIRED TO ADJUST EXISTING AND PROPOSED UTILITIES AND APPURTENANCES TO FINISHED GRADES WITHIN THE LIMITS OF WORK. DAMAGE TO EXISTING CONDITIONS AND UTILITIES SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.</li> <li>EXISTING UTILITIES WHICH ARE NOT TO BE REMOVED OR ABANDONED SHALL REMAIN OPERATIONAL AT ALL TIMES. APPROPRIATE EXISTING UTILITIES SHALL REMAIN IN SERVICE UNTIL REPLACEMENT/RELOCATED UTILITIES ARE OPERATIONAL, UNLESS OTHERWISE NOTED.</li> <li>THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WATER, SEWER, AND DRAIN BUILDING CONNECTIONS WITH THE LATEST PLUMBING DRAWINGS.</li> <li>ELECTRIC, TELEPHONE, GAS, CABLE, LIGHTING, AND RETAINING WALLS TO BE DESIGNED BY OTHERS, WHERE THOSE FACILITIES ARE SHOWN, THEY ARE FOR COORDINATION PURPOSES ONLY.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK NOT SPECIFICALLY MENTIONED ON THE PLANS WHICH NORMALLY WOULD BE REQUIRED TO COMPLETE THE PROJECT.</li> </ol> <p><b>CONSULTANTS</b></p> <p><b>STRUCTURAL</b>    COLUMBIA ENGINEERING    6210 OLD DOBBIN LANE, SUITE 150    COLUMBIA, MD. 21045</p> <p><b>MEP</b>    JAMES POSEY ASSOCIATES    11155 RED RUN BLVD.    OWINGS MILLS, MD. 21117</p> <p>Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland. License No. 3715R, expiration date: 05.02.2024."</p> <p>PROJECT    Howard County Public School System    Applications and Research Laboratory (ARL)    Automotive Lab Renovation    10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042</p> <p>DRAWING TITLE  <b>PROJECT NOTES, ABBREVIATIONS AND CODE ANALYSIS</b></p> <table border="1"> <thead> <tr> <th>SEAL</th> <th>DRAWN</th> <th>PROJECT #</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>23001.00</td> </tr> <tr> <td></td> <th>CHECKED</th> <th>DRAWING #</th> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <th>REVIEWED</th> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <th>DATE</th> <td></td> </tr> <tr> <td></td> <td>03/28/2023</td> <td></td> </tr> <tr> <td></td> <th>SCALE</th> <td></td> </tr> <tr> <td></td> <td></td> <td><b>A0.01</b></td> </tr> </tbody> </table>	NO	REVISION / SUBMISSION	DATE	1	75% CONSTRUCTION DOCUMENTS	2/28/2023	2	100% CONSTRUCTION DOCUMENTS	3/28/2023	3	BID DOCUMENTS	4/21/2023	4	BID DOCUMENTS - REVISED FINAL	6/21/2023	SEAL	DRAWN	PROJECT #			23001.00		CHECKED	DRAWING #					REVIEWED						DATE			03/28/2023			SCALE				<b>A0.01</b>
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**DEMOLITION GENERAL NOTES**

REFER TO SELECTIVE DEMOLITION NOTES ON SHEET A0.1

**DEMOLITION PLAN KEY NOTES**

- ITEMS TO REMAIN, THUS: [ ]  
 ITEMS TO BE REMOVED, THUS: [ ]
- 01 E.T.R. EXTERIOR CHAIN LINK FENCE AND GATE INTO REAR YARD. CAREFUL NOT TO DISTURB FENCE POST FOOTINGS.
  - 02 REMOVE ENTIRE EXISTING ASPHALT / CONCRETE PAVING WITHIN FENCED AREA DOWN TO BASE MATERIAL IN PREPARATION FOR NEW ASPHALT PAVING.
  - 03 REMOVE CONCRETE SIDEWALK ADJACENT TO BUILDING TO A DEPTH OF 10" IN PREPARATION FOR NEW CONCRETE. PROTECT METAL ANGLE AT EDGE OF TURN DOWN FOOTING TO REMAIN.
  - 04 E.T.R. STRUCTURAL STEEL POST, TYPICAL EXTERIOR JUNCTION BOX ON OUTSIDE FACE OF POST TO REMAIN.
  - 05 E.T.R. 6" CMU WALL PARTITION
  - 06 E.T.R. CLASSROOM DOOR AND FRAME. PROVIDE PROTECTIVE COVERING DURING CONSTRUCTION.
  - 07 E.T.R. CLASSROOM WINDOWS AND FRAME. PROVIDE PROTECTIVE COVERING DURING CONSTRUCTION.
  - 08 E.T.R. CONCRETE RAMP AND STEEL RAILING. PROTECT DURING CONSTRUCTION.
  - 09 E.T.R. HAND SINK TO REMAIN.
  - 10 REMOVE 6" CMU WALL PARTITION. CONFIRM WITH CONSTRUCTION MANAGER WHETHER TO SALVAGE MARKER BOARD, TACK BOARD OR ANY OTHER EQUIPMENT ON WALL.
  - 11 REMOVE METAL DOOR AND FRAME. PREP OPENING IN INTERIOR PARTITION FOR INFILL 6" CMU WALL.
  - 12 REMOVE EXTERIOR METAL FRAME WALL ASSEMBLY UP TO BOTTOM OF STEEL BEAM STRUCTURE (AT ±10'-1" AFF) AND PREP SLAB FOR NEW MASONRY CONSTRUCTION.
  - 13 REMOVE PRECAST CONCRETE PANEL WALL ASSEMBLY UP TO BOTTOM OF STEEL (AT ±10'-1" AFF) AND PREP SLAB FOR NEW MASONRY CONSTRUCTION.
  - 14 REMOVE EXISTING RESILIENT FLOOR TILE AND 4" RUBBER WALL BASE. PREP FLOORS FOR NEW CONCRETE FINISH.
  - 15 COORDINATE WITH ELECTRICAL PLANS REGARDING ELECTRICAL SERVICE TO REMAIN. COORDINATE RELOCATION WITHIN NEW WALL ASSEMBLY IF POSSIBLE.
  - 16 E.T.R. METAL DOOR AND FRAME.
  - 17 E.T.R. SECURITY ALARM, PULL STATION, HORN/STROBE DEVICE, SWITCH GANG BOX, AND CONDUIT.
  - 18 FIRE EXTINGUISHER CABINET TO REMAIN.
  - 19 CONTRACTOR TO PROVIDE ALLOWANCE TO RECONSTRUCT CMU CHASE WALL THAT CONCEALS PLUMBING IF REQUIRED FOR INSTALLATION OF NEW EXTERIOR WALL.
  - 20 E.T.R. 8 FOOT HIGH METAL STUD FRAME WALL WITH GWB FINISH.
  - 21 DISCONNECT FROM ALL PIPING CONNECTIONS AND REMOVE (2) SINKS AND (1) SOLID WASTE INTERCEPTOR. CAP ALL CONNECTIONS AND DEMO PORTION OF FLOOR FOR SANITARY TIE-IN. REFER TO PLUMBING PLANS FOR NEW WORK.
  - 22 REMOVE EPOXY RESIN COUNTERTOP, BACKSPLASH, INTEGRAL SINK AND BASE CABINETS.
  - 23 REMOVE OVERHEAD FUME HOOD AND CAP OFF ABOVE TOP OF CABINETS AT 7'-2" AFF. SEE MECH DEMO PLANS.
  - 24 UPPER AND LOWER WALL CABINET, WIRE MOLD AND OTHER WALL MTD ITEMS TO REMAIN. REMOVE P. LAM COUNTERTOP AND BACKSPLASH ONLY TO BE REPLACE. REFER TO A3.01 FOR MORE DETAIL.
  - 25 REMOVE EXISTING CONCRETE FILL IN FLOOR TRENCH WITHOUT DAMAGING SLAB ON GRADE. REMOVE ALL LOOSE DEBRIS IN PREPARATION FOR NEW WORK. REFER TO STRUCTURAL DETAILS.
  - 26 E.T.R. 4" PVC CLEANOUT, APPROXIMATE LOCATION. DO NOT DISTURB.

KEY PLAN

NO	REVISION / SUBMISSION	DATE
1	75% CONSTRUCTION DOCUMENTS	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023

**SM+P** ARCHITECTS  
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 TEL 410-685-3582 WWW.SMP-ARCHITECTS.COM

**STRUCTURAL**  
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 COLUMBIA, MD. 21045

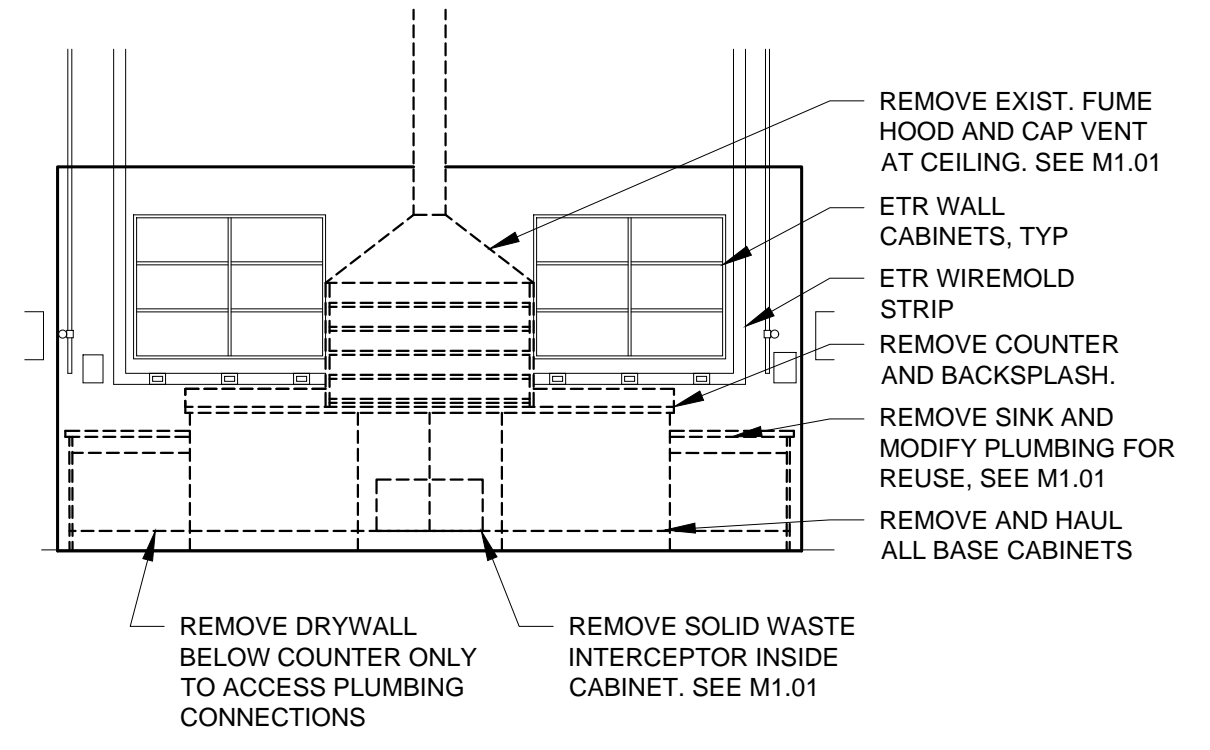
**MEP**  
 JAMES POSEY ASSOCIATES  
 1155 RED RUN BLVD.  
 OWINGS MILLS, MD. 21117

Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland. License No. 3715R, expiration date: 05.02.2024."

**PROJECT**  
 Howard County Public School System  
 Applications and Research Laboratory (ARL)  
 Automotive Lab Renovation  
 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

**DRAWING TITLE**  
 FIRST FLOOR  
 DEMOLITION PLAN

SEAL	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	
	REVIEWED		
	DATE	03/28/2023	
	SCALE		



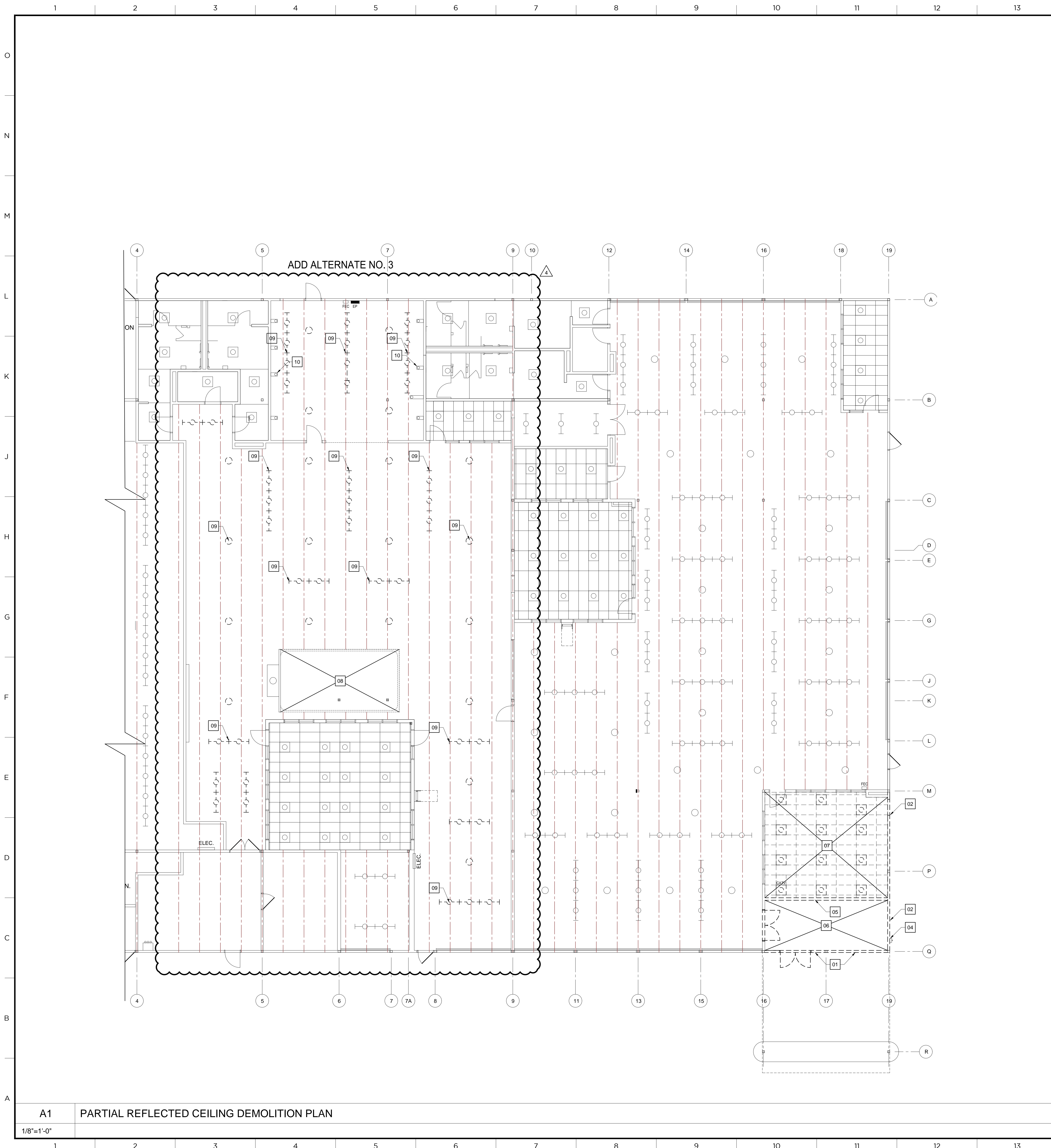
**A1 PARTIAL FIRST FLOOR DEMOLITION PLAN**

1/8"=1'-0"

**A14 SINK AREA DEMOLITION DIAGRAM**

1/4"=1'-0"

**A1.01**



**DEMOLITION GENERAL NOTES**

REFER TO SELECTIVE DEMOLITION NOTES ON SHEET A0.1

**DEMOLITION CEILING PLAN KEY NOTES**

- ITEMS TO REMAIN, THUS:   ITEMS TO BE REMOVED, THUS:
- 01 REMOVE EXTERIOR METAL FRAME WALL ASSEMBLY UP TO BOTTOM OF STEEL BEAM STRUCTURE AT APPROX. 10'-1" AFF, TYPICAL THIS WALL ONLY.
  - 02 REMOVE PRECAST CONCRETE PANEL WALL ASSEMBLY TO BOTTOM OF STEEL BEAM @ ±10'-11" AFF
  - 03 NOT USED.
  - 04 COORDINATE WITH ELECTRICAL REGARDING EXISTING ELECTRIC SERVICE CONDUIT TO REMAIN.
  - 05 INTERIOR 6" CMU WALL PARTITION TO BE REMOVED.
  - 06 REMOVE EXISTING CEILING MOUNTED LINEAR FIXTURES AND MECHANICAL EQUIPMENT IN PREPARATION FOR ENLARGED CLASSROOM. SEE MECH AND ELECTRICAL PLANS FOR FURTHER DETAILS ON NEW WORK.
  - 07 REMOVE EXISTING LAY-IN CEILING GRID, TILE AND LIGHT FIXTURES. RETAIN ALL EMERGENCY LIGHTING, EXIT SIGNAGE, CAMERAS, PROJECTION EQUIPMENT, ETC FOR REUSE. COORDINATE LOCATION OF NEW CEILING LIGHTS, DIFFUSERS AND SPRINKLER HEADS WITH MEP WORK.
  - 08 RETAIN EXISTING LINEAR LIGHTS IN CEILING OF FORMER SPRAY BOOTH (FUTURE ENGINE ROOM).
  - 09 REMOVE CEILING MOUNTED PENDANT LIGHTS IN WELDING, DIAGNOSTIC AND SINK AREA. RETAIN JUNCTION BOXES FOR LED LIGHT REPLACEMENT IN-KIND. REFER TO ELEC DEMO PLANS.
  - 10 APPROXIMATE LOCATIONS OF WALL MOUNTED BRACKETS FOR EXISTING SNORKEL HOSES TO REMAIN
  - 11 INSTALL NEW ROOF MOUNTED EXHAUST EQUIPMENT WITH (4) FLEXIBLE SNORKEL HOSES SUSPENDED FROM CEILING. REFER TO MECH PLANS FOR MORE DETAIL.

KEY PLAN

NO	REVISION / SUBMISSION	DATE
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**PROJECT**  
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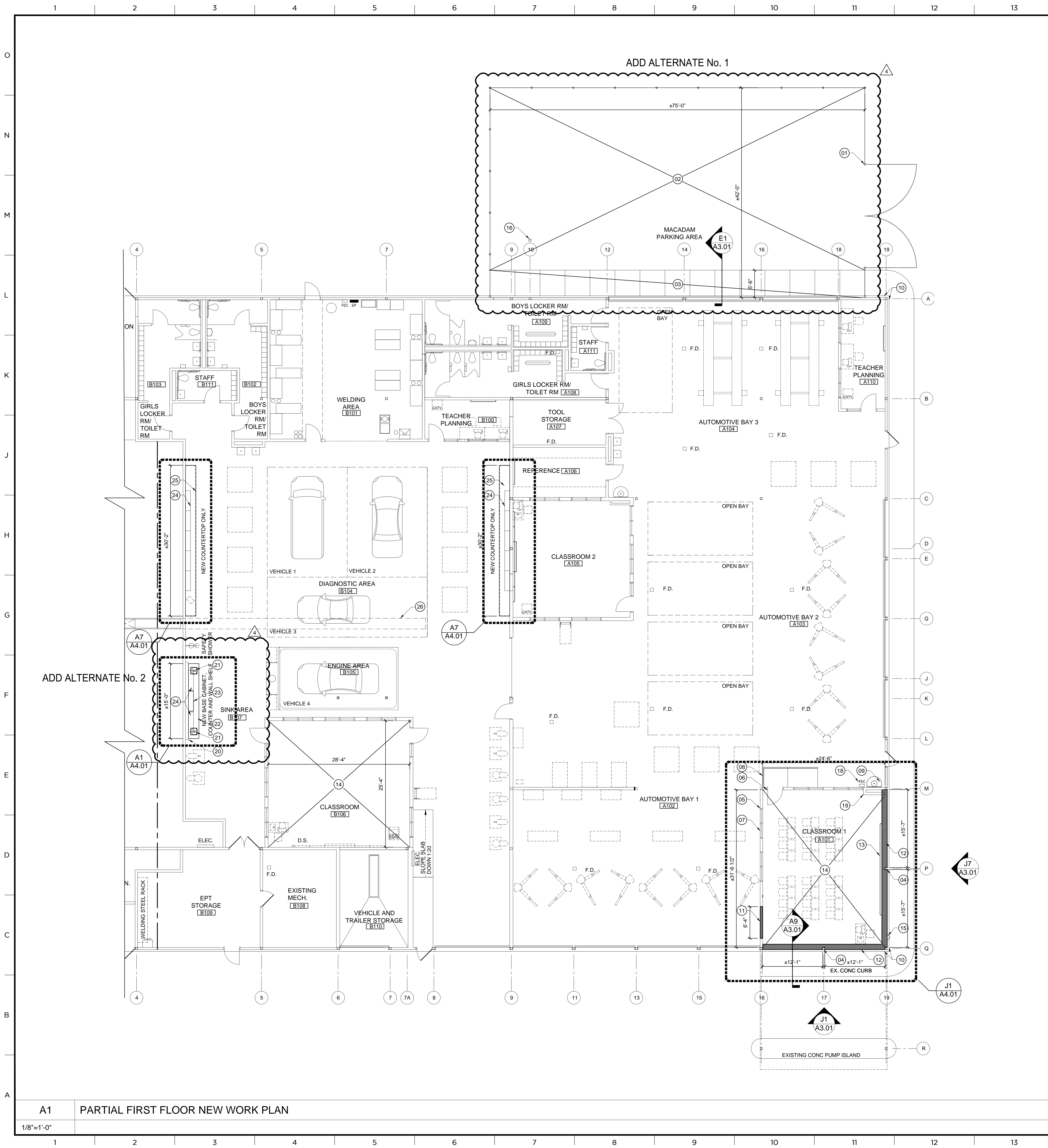
**DRAWING TITLE**  
REFLECTED CEILING  
DEMOLITION PLAN

	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	
	REVIEWED	DATE	03/28/2023
	SCALE		

A1.02

A1 PARTIAL REFLECTED CEILING DEMOLITION PLAN

1/8"=1'-0"



**NEW WORK GENERAL NOTES**

- A. CONTRACTOR SHALL VERIFY AS SOON AS POSSIBLE AFTER AWARD OF CONTRACT THE ACCURACY OF ALL EXISTING DIMENSIONS AND EXISTING ELEVATIONS WHICH ARE REFERENCED ON THESE DOCUMENTS. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
- B. DIMENSIONS ARE FROM FINISH FACE TO FINISH FACE, UNLESS NOTED OTHERWISE.
- C. PATCH WALL AND CEILING SURFACES TO REMAIN WHICH WHICH EXHIBIT EXISTING DAMAGE OR THAT ARE DAMAGED OR ALTERED BY CONSTRUCTION ACTIVITIES. REMOVE EXISTING LOOSE PAINT, SCREWS, HOOKS, ACCESSORIES, ETC. WHERE NOT REQUIRED FOR NEW WORK AND PATCH SURFACES ACCORDINGLY. PREPARE WALLS AND CEILINGS FOR NEW PAINT FINISHES.
- D. COORDINATE ALL NEW WORK WITH EXISTING AND MODIFIED SYSTEMS AND UTILITIES. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
- E. PROVIDE SOLID 2X BLOCKING AT ALL FRAMED WALLS. PROVIDE BLOCKING FOR ALL FIXTURES, TRACKS AND HANGERS AS NECESSARY.
- F. COMPLY WITH ALL SPECIFICATIONS AND PROJECT REQUIREMENTS.

**NEW WORK PLAN KEY NOTES**

- 01 E.T.R. EXTERIOR CHAIN LINK FENCE AND GATE INTO REAR YARD. CAREFUL NOT TO DISTURB FENCE POST FOOTINGS WHEN INSTALLING NEW PAVING
- 02 INSTALL NEW ASPHALT PAVING WITHIN FENCED AREA. REFER TO SITEWORK NOTES ON A0.1 AND SPECIFICATIONS.
- 03 INSTALL NEW 5" 4000 PSI, AIR ENTRAINED, REINFORCED CONCRETE SIDEWALK ADJACENT TO BUILDING FOOTING. REFER TO DETAILS E133.01.
- 04 E.T.R. STRUCTURAL STEEL POST TO REMAIN, TYPICAL. EXTERIOR JUNCTION BOX ON OUTSIDE FACE OF POST TO REMAIN. COORDINATE WITH ELECTRICAL.
- 05 E.T.R. 6" CMU WALL PARTITION
- 06 E.T.R. CLASSROOM DOOR AND FRAME. PROTECT DURING CONSTRUCTION AND REPAIR TO MATCH.
- 07 E.T.R. CLASSROOM WINDOWS AND FRAME. PROTECT DURING CONSTRUCTION AND REPAIR TO MATCH.
- 08 E.T.R. CONCRETE RAMP AND STEEL RAILING. PROTECT DURING CONSTRUCTION AND REPAIR RAILING.
- 09 E.T.R. HAND SINK TO REMAIN.
- 10 EDGE OF EXISTING TURN DOWN SLAB, CONTINUOUS AROUND PERIMETER OF BUILDING.
- 11 6" CMU INFILL IN FORMER DOOR OPENING AND PAINT TO MATCH ADJACENT SURFACES. SEE STRUCT.
- 12 CONSTRUCT INFILL MASONRY EXTERIOR WALL ON EXISTING SLAB. EXTEND TO UNDERSIDE OF STEEL BEAM (AT ±10'-1" AFF), TYPICAL FOR TWO WALLS AS SHOWN. REFER TO DETAILS ON A3.01.
- 13 FURNISH AND INSTALL NEW WALL MOUNTED MARKER AND TACK BOARD. SEE INTERIOR ELEVATION FOR DIMENSIONS.
- 14 SCRAPE, SAND AND PREP EXISTING CONCRETE FLOOR FOR NEW SEALER. INSTALL NEW 4" RUBBER WALL BASE TO MATCH EXISTING.
- 15 COORDINATE WITH ELECTRICAL PLANS REGARDING ELECTRICAL SERVICE TO REMAIN.
- 16 E.T.R. 4" PVC CLEANOUT, APPROXIMATE LOCATIONS SHOWN. DO NOT DISTURB
- 17 NOT USED
- 18 E.T.R. FIRE EXTINGUISHER CABINET.
- 19 CONTRACTOR TO PROVIDE ALLOWANCE TO RECONSTRUCT CMU CHASE WALL THAT CONCEALS PLUMBING IF REQUIRED FOR INSTALLATION OF NEW EXTERIOR WALL.
- 20 E.T.R. 8 FOOT HIGH METAL STUD FRAME WALL WITH GWB FINISH. REPAIR GWB FOLLOWING PLUMBING ROUGH-IN. TAPE, MUD, SKIM AND PAINT TO MATCH EXISTING FINISH.
- 21 CONNECT NEW DROP-IN STAINLESS STEEL DROP-IN HAND SINKS AND FAUCETS TO EXISTING 1/2" HOT AND COLD WATER SUPPLY PIPING. REFER TO PLUMBING PLAN FOR SANITARY CONNECTION DETAILS. WRAP ALL EXPOSED PIPING WITH PVC PIPE COVERS.
- 22 INSTALL NEW P-LAM BASE CABINETS, COUNTERTOP AND 4" BACKSPLASH. SEE MILLWORK DETAILS.
- 23 INSTALL NEW P-LAM WALL SHELVING, ALIGN WITH EXISTING. SEE MILLWORK DETAILS ON A4.01. PROVIDE BLOCKING AS REQUIRED.
- 24 UPPER AND LOWER WALL CABINET, WIRE MOLD AND OTHER WALL MOUNTED ITEMS TO REMAIN.
- 25 INSTALL NEW P-LAM COUNTERTOP AND BACKSPLASH ONLY. REFER TO MILLWORK DETAILS.
- 26 INFILL FLOOR TRENCH WITH REINFORCED 3,000 PSI CONCRETE PER STRUCTURAL DETAILS.

**KEY PLAN**

NO	REVISION / SUBMISSION	DATE
1	75% CONSTRUCTION DOCUMENTS	2/28/2023
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**STRUCTURAL**  
 COLUMBIA ENGINEERING  
 6210 OLD DOBBIN LANE, SUITE 150  
 COLUMBIA, MD. 21045

**MEP**  
 JAMES POSEY ASSOCIATES  
 1155 RED RUN BLVD.  
 OWINGS MILLS, MD. 21117

Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland. License No. 3715R, expiration date: 05.02.2024."

**PROJECT**  
 Howard County Public School System  
 Applications and Research Laboratory (ARL)  
 Automotive Lab Renovation  
 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

**DRAWING TITLE**  
 FIRST FLOOR  
 NEW WORK PLAN

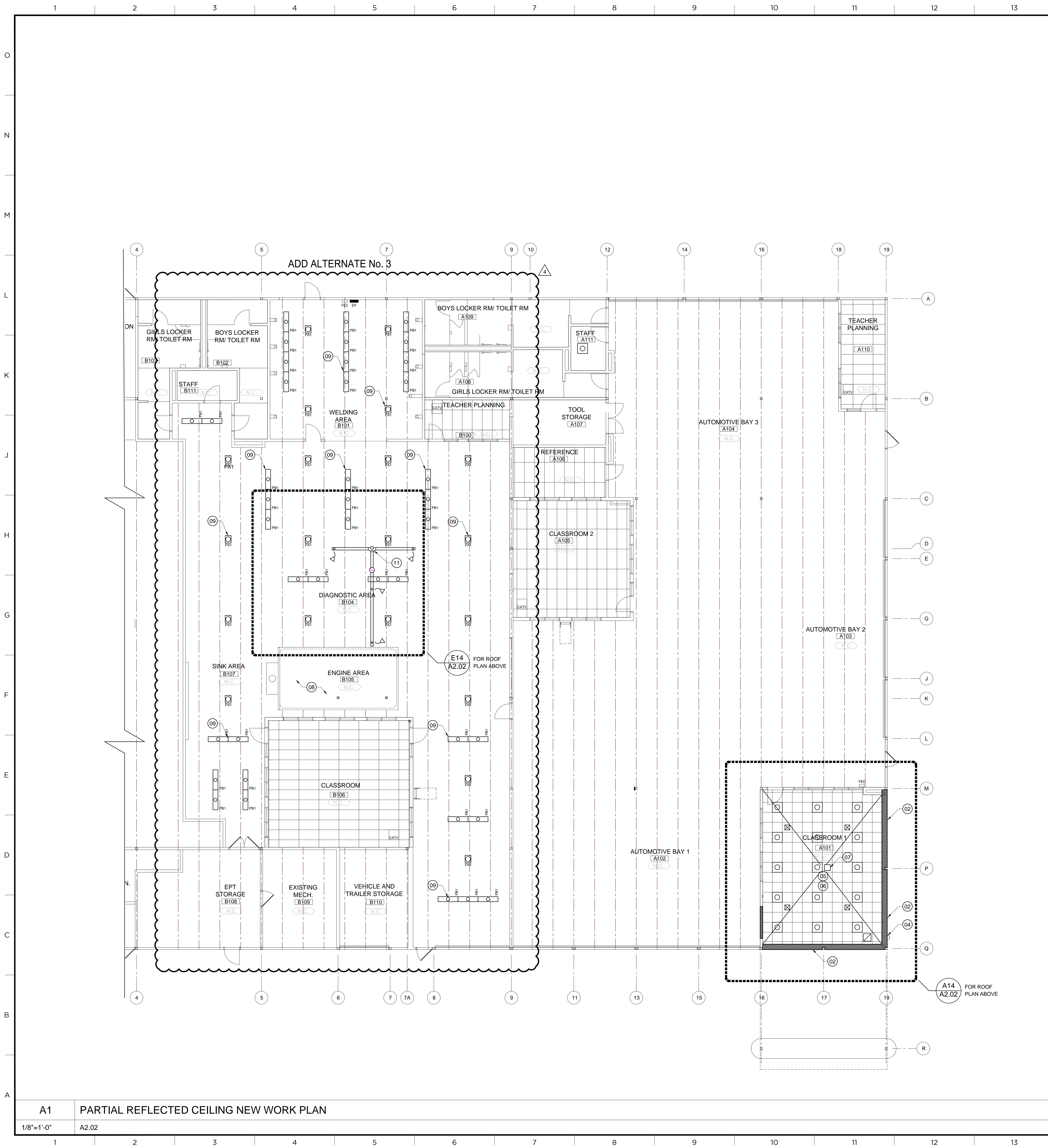
SEAL	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	
	REVIEWED		
	DATE		03/28/2023
	SCALE		

**A2.01**

A1 PARTIAL FIRST FLOOR NEW WORK PLAN

1/8"=1'-0"





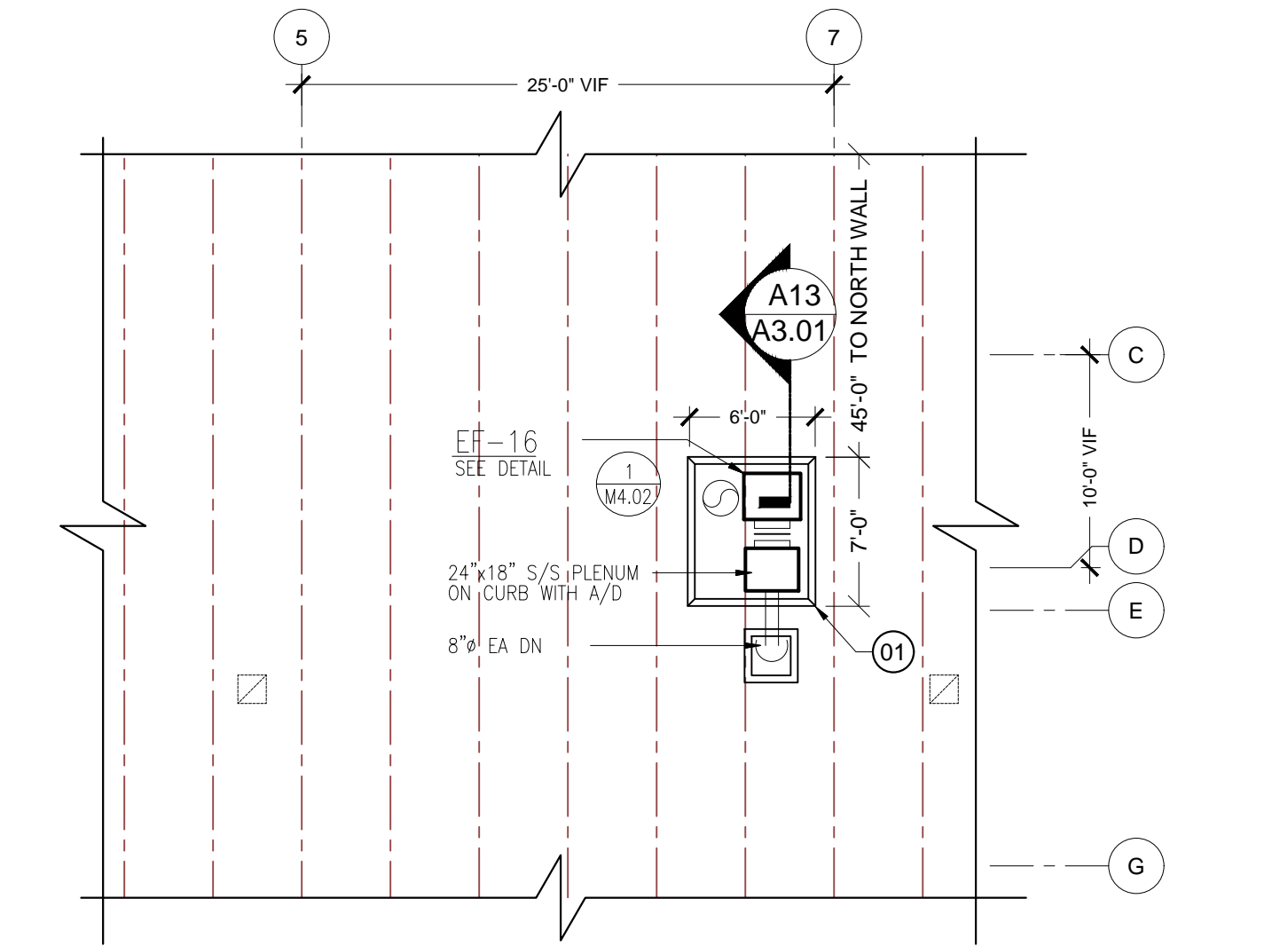
**NEW WORK GENERAL NOTES**

- A. CONTRACTOR SHALL VERIFY AS SOON AS POSSIBLE AFTER AWARD OF CONTRACT THE ACCURACY OF ALL EXISTING DIMENSIONS AND EXISTING ELEVATIONS WHICH ARE REFERENCED ON THESE DOCUMENTS. REPORT ANY DISCREPANCIES TO THE ARCHITECT.
- B. DIMENSIONS ARE FROM FINISH FACE TO FINISH FACE, UNLESS NOTED OTHERWISE.
- C. PATCH WALL AND CEILING SURFACES TO REMAIN WHICH WHICH EXHIBIT EXISTING DAMAGE OR THAT ARE DAMAGED OR ALTERED BY CONSTRUCTION ACTIVITIES. REMOVE EXISTING LOOSE PAINT, SCREWS, HOOKS, ACCESSORIES, ETC. WHERE NOT REQUIRED FOR NEW WORK AND PATCH SURFACES ACCORDINGLY. PREPARE WALLS AND CEILINGS FOR NEW PAINT FINISHES.
- D. COORDINATE ALL NEW WORK WITH EXISTING AND MODIFIED SYSTEMS AND UTILITIES. NOTIFY ARCHITECT IMMEDIATELY OF ANY CONFLICTS.
- E. PROVIDE SOLID 2X BLOCKING AT ALL FRAMED WALLS. PROVIDE BLOCKING FOR ALL FIXTURES, TRACKS AND HANGERS AS NECESSARY.
- F. COMPLY WITH ALL SPECIFICATIONS AND PROJECT REQUIREMENTS.

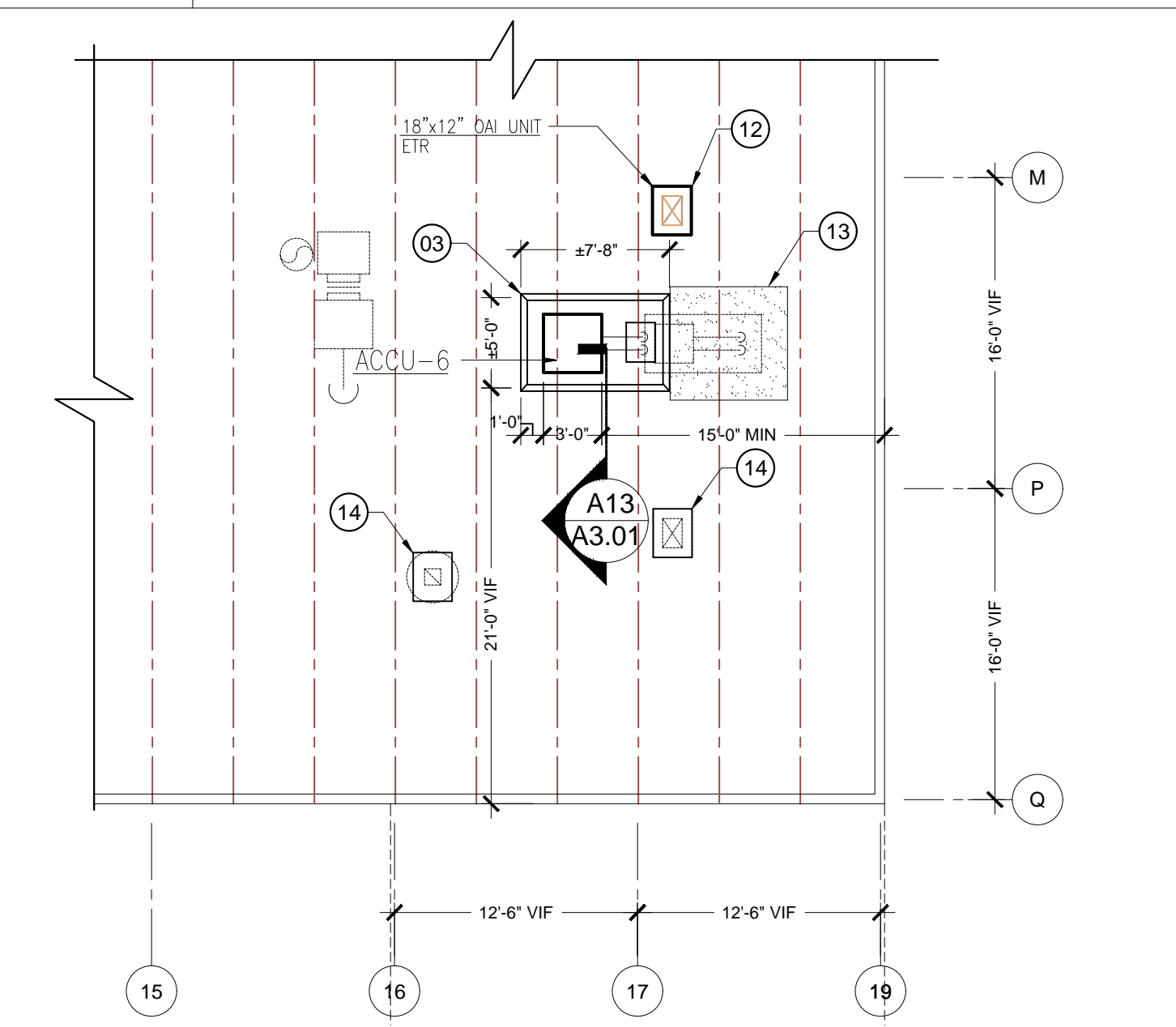
**NEW WORK CEILING PLAN KEY NOTES**

- 01. CONSTRUCT PERIMETER CURB FOR ROOF MOUNTED EXHAUST FAN. ADJUST LOCATION AS REQUIRED RELATIVE TO STRUCTURAL JOISTS. SEE TYPICAL CURB DETAIL ON A3.01 AND S0.01 FOR FRAMING DETAILS.
- 02. CONSTRUCT INFILL MASONRY EXTERIOR WALL ON EXISTING SLAB. EXTEND TO UNDERSIDE OF STEEL BEAM (AT ±10'-7" AFF). TYPICAL FOR TWO WALLS AS SHOWN. REFER TO DETAILS ON A3.01.
- 03. CONSTRUCT PERIMETER CURB FOR MECHANICAL EQUIPMENT. SEE TYP. CURB DETAIL ON A3.01.
- 04. COORDINATE WITH ELECTRICAL REGARDING EXISTING ELECTRIC SERVICE CONDUIT TO REMAIN.
- 05. PROVIDE NEW MECHANICAL EQUIPMENT SUSPENDED FROM ROOF STRUCTURE ABOVE CLASSROOM CEILING. SEE MECH AND ELECTRICAL PLANS FOR FURTHER DETAILS ON NEW WORK.
- 06. PROVIDE NEW LAY-IN CEILING GRID, ACOUSTIC TILE, LAY-IN LIGHTS, EMERGENCY LIGHTING, EXIT SIGNAGE, AIR DIFFUSERS, ETC. MODIFY SPRINKLER SYSTEM FOR ENLARGED CLASSROOM. COORDINATE LOCATION OF CEILING LIGHTS, DIFFUSERS AND SPRINKLER HEADS WITH MEP WORK.
- 07. REINSTALL CEILING MOUNTED PROJECTOR SALVAGED FROM DEMOLITION. CONFIRM LOCATION WITH CONSTRUCTION MANAGER.
- 08. LINEAR LIGHTS IN CEILING OF ENGINE ROOM TO REMAIN. NO WORK THIS AREA.
- 09. PROVIDE NEW LED PENDANT LIGHTS USING EXISTING JUNCTION BOXES. TYPICAL FOR ALL IN WELDING, DIAGNOSTIC AND SINK AREAS. REFER TO ELECTRICAL PLANS FOR LIGHT FIXTURE SPECS.
- 10. APPROXIMATE LOCATIONS OF WALL MOUNTED BRACKETS FOR EXISTING SNORKEL HOSES TO REMAIN.
- 11. PROVIDE NEW ROOF MOUNTED EXHAUST EQUIPMENT WITH (4) FLEXIBLE SNORKEL HOSES SUSPENDED FROM CEILING. REFER TO MECH PLANS, DTL A/M2.01.
- 12. REUSE EXISTING ROOF PENETRATION FOR OUTSIDE AIR INTAKE.
- 13. PATCH ROOF IN AREA OF REMOVED ROOFTOP EQUIPMENT. PROVIDE SUBMITTAL THAT CONFIRMS COMPATIBILITY WITH EXISTING ROOF AND MAINTAINS WATERTIGHT SEAL. SEAL AROUND NEW CURB.
- 14. CAPPED ROOF CURB. SEE MECHANICAL.

KEY PLAN



**E14 PARTIAL ROOF PLAN @ DIAGNOSTIC AREA B104**  
1/8"=1'-0" A2.02



**A14 PARTIAL ROOF PLAN @ CLASSROOM A101**  
1/8"=1'-0" A2.02

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**MEP**  
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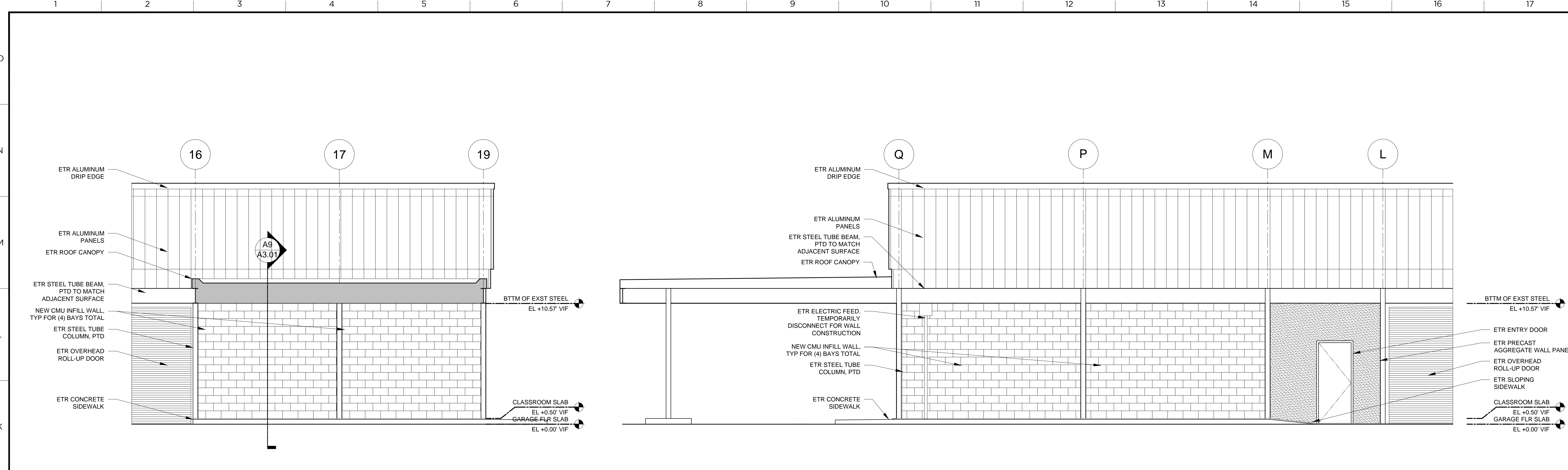
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Howard County Public School System  
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**DRAWING TITLE**  
REFLECTED CEILING  
NEW WORK PLAN

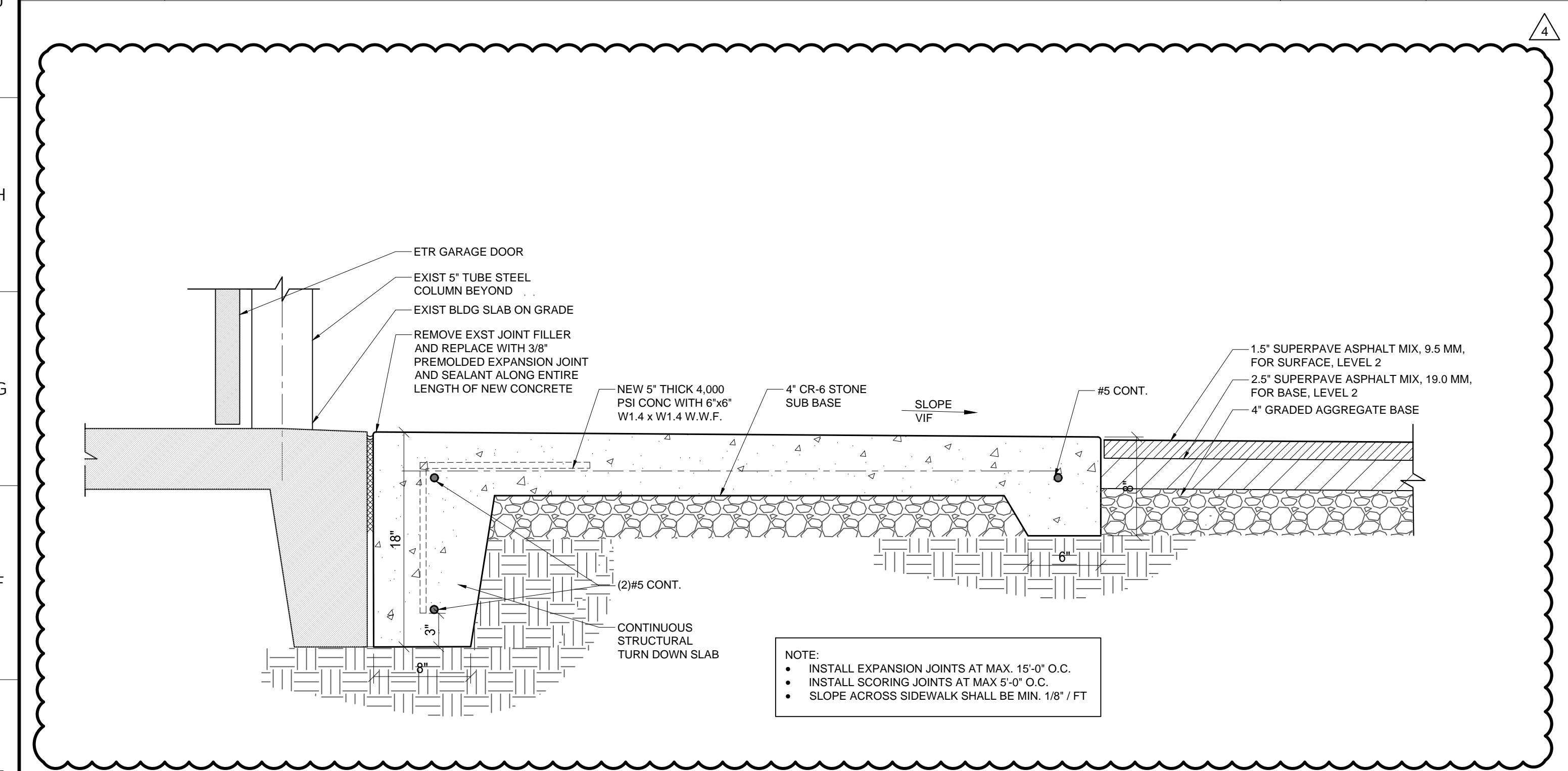
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**A2.02**

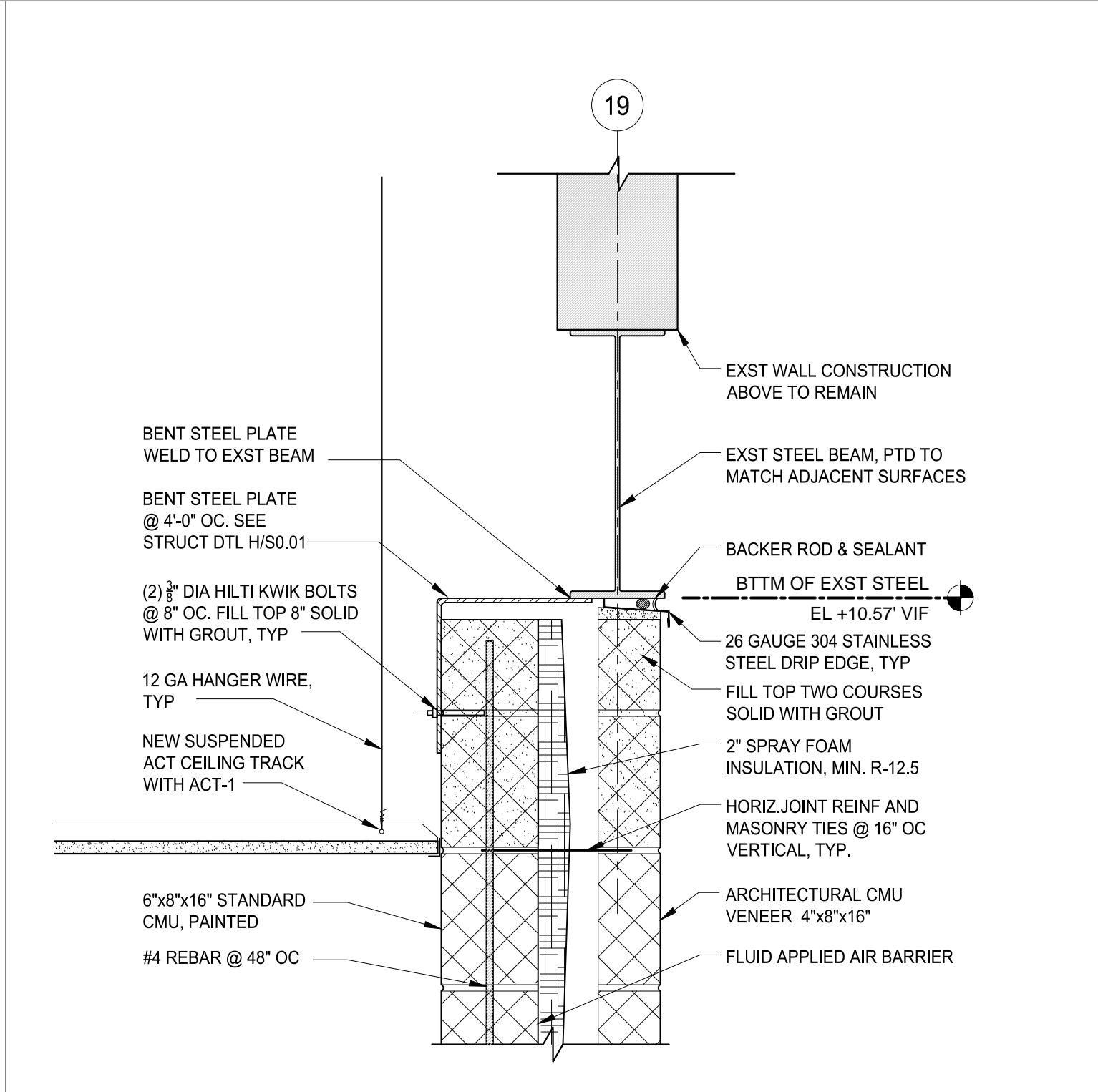


**J1** EXTERIOR ELEVATIONS - SOUTHEAST CORNER  
1/8"=1'-0" A3.01

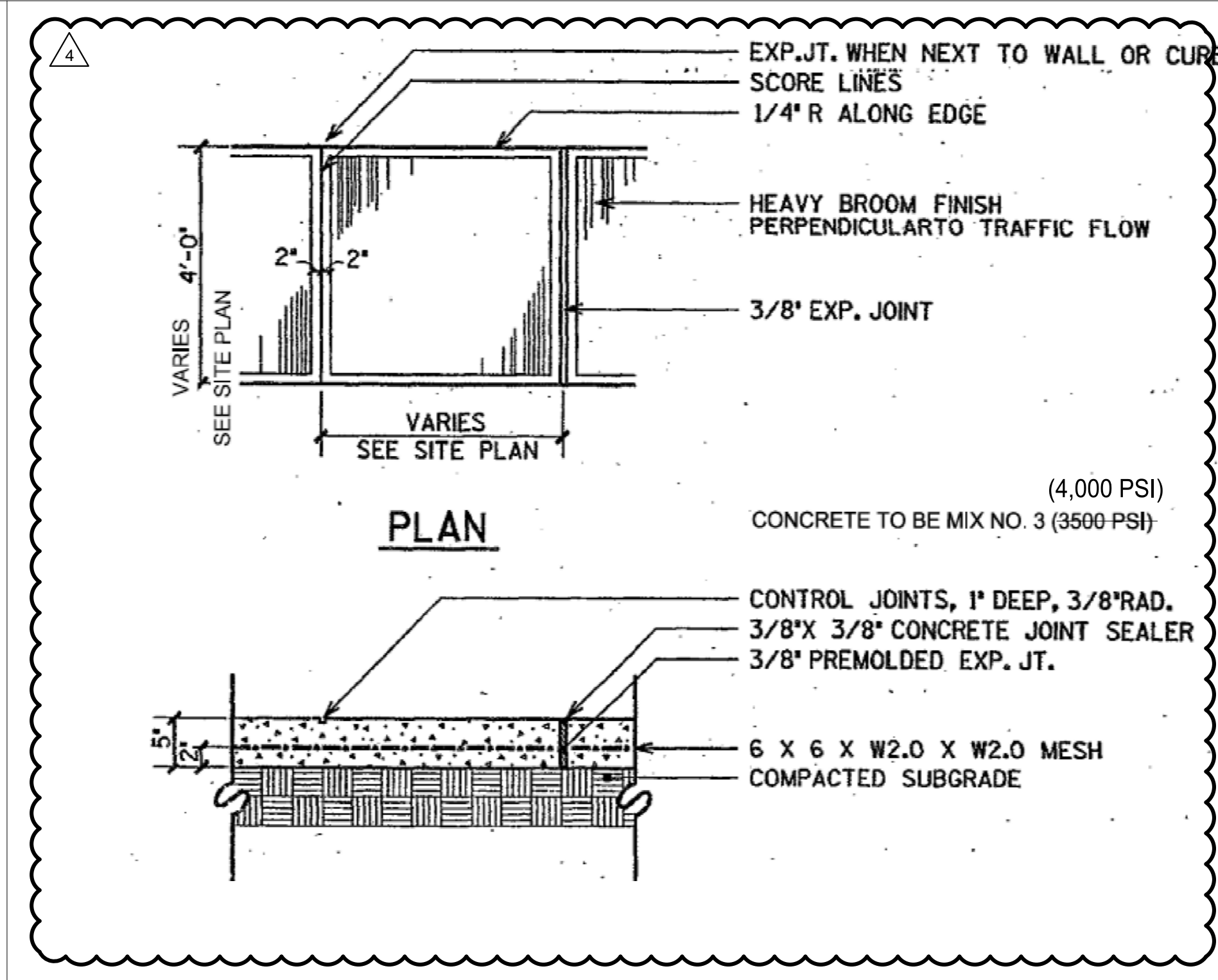
**J7** EXTERIOR ELEVATIONS - SOUTHEAST CORNER  
1/8"=1'-0" A3.01



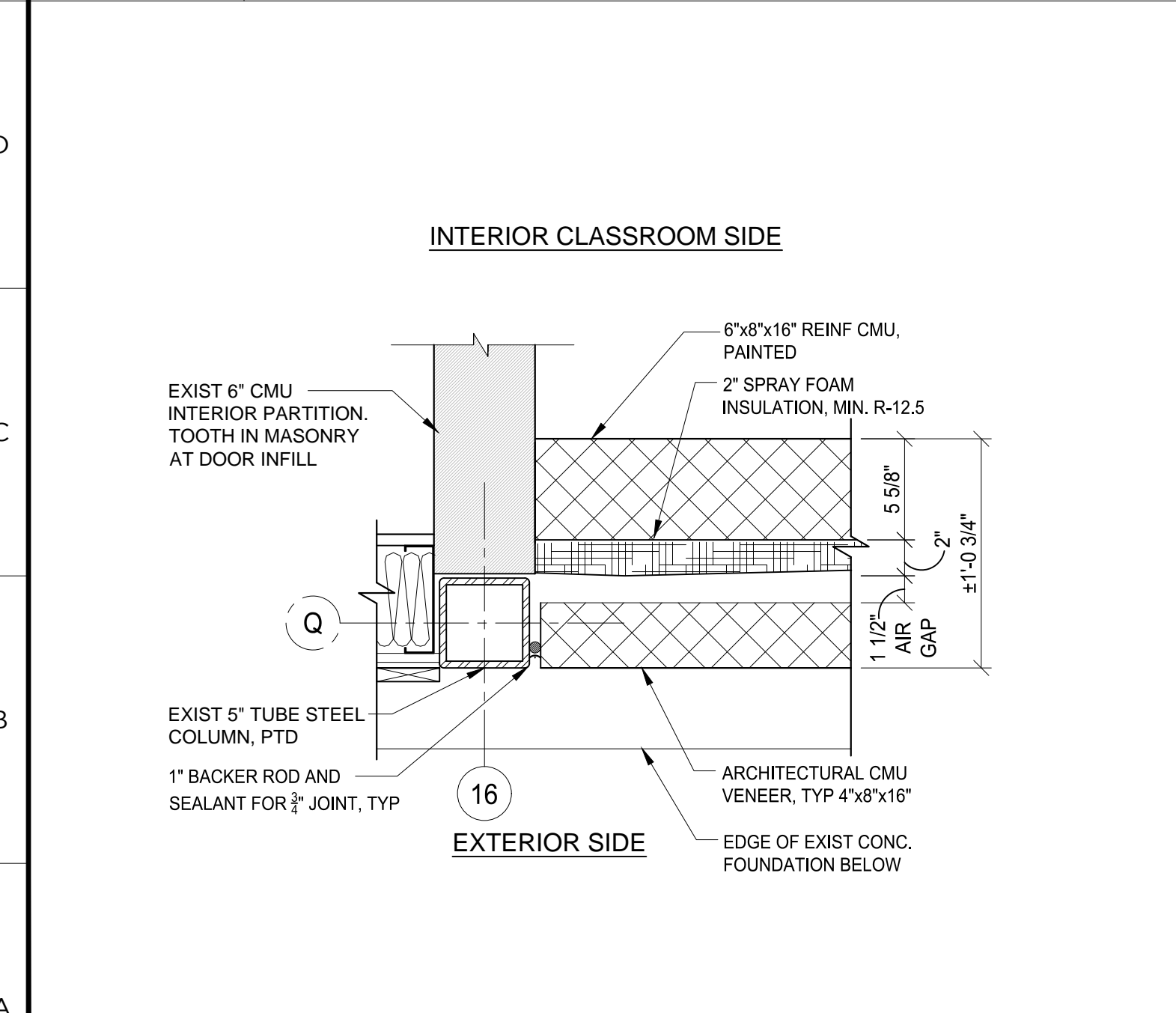
**E1** SECTION THRU SIDEWALK AND PAVING  
1-1/2"=1'-0" A3.01



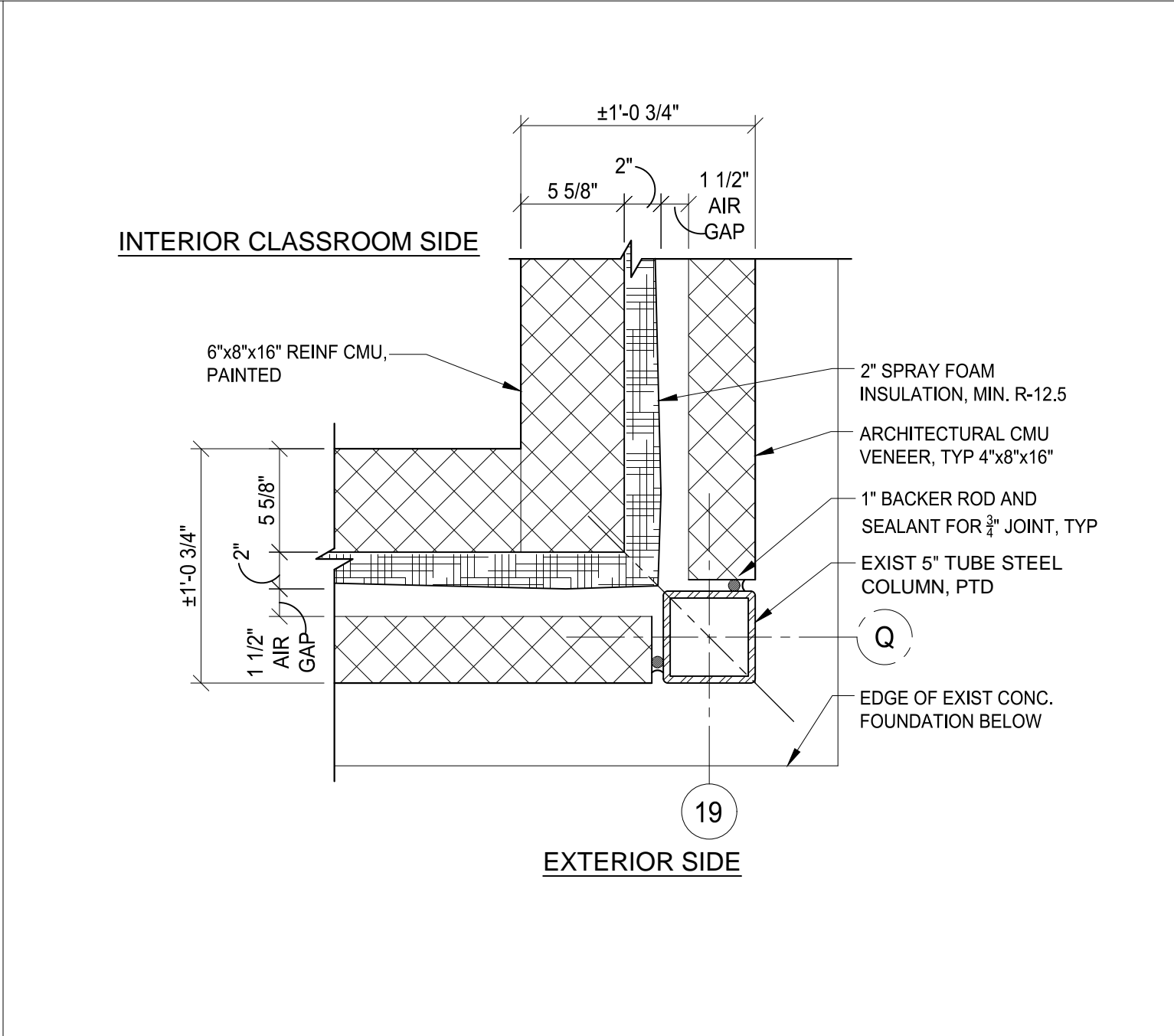
**E9** SECTION DETAILS AT EXTERIOR WALL  
1-1/2"=1'-0"



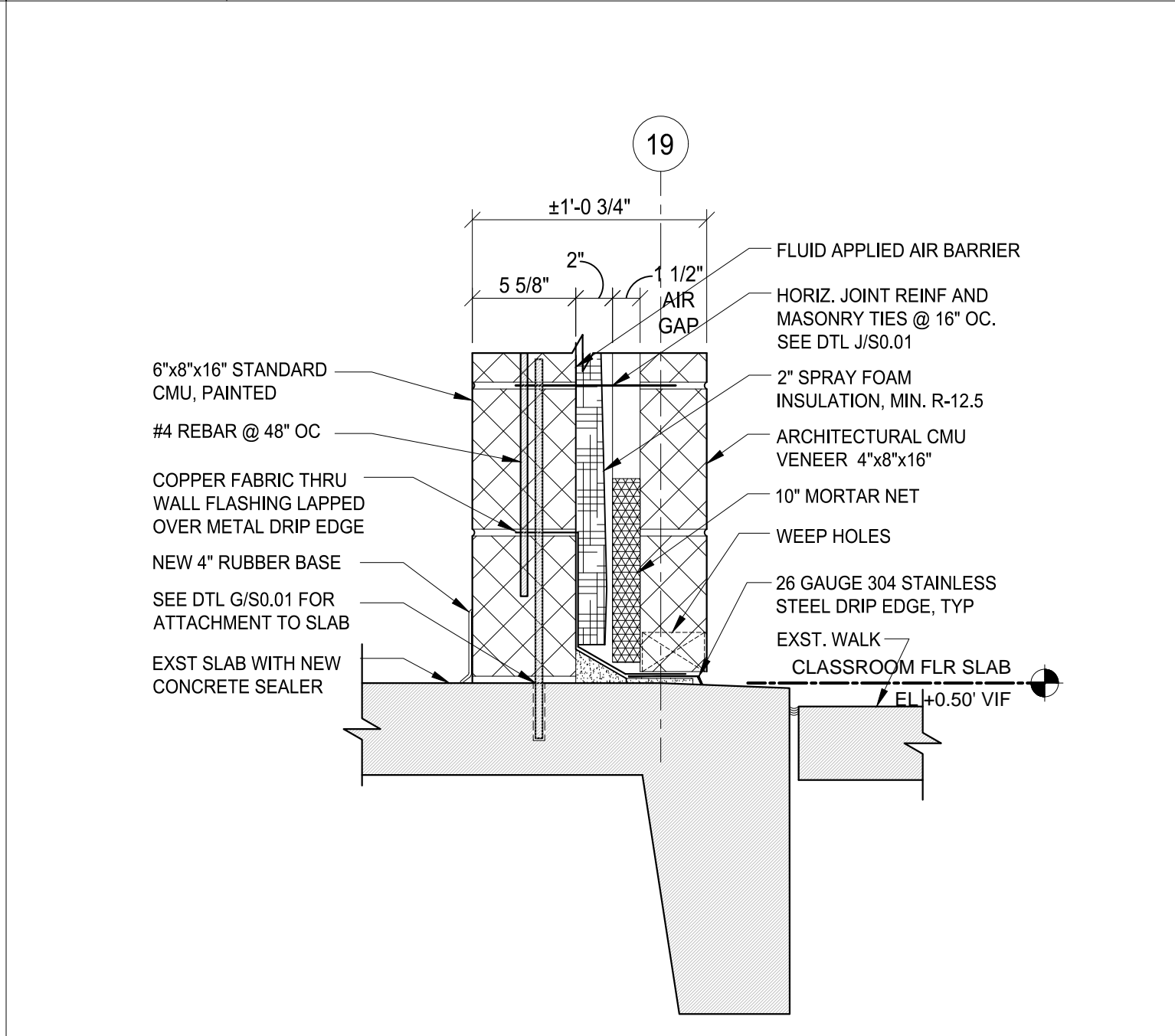
**E13** CONCRETE WALK DETAIL  
NTS A3.01



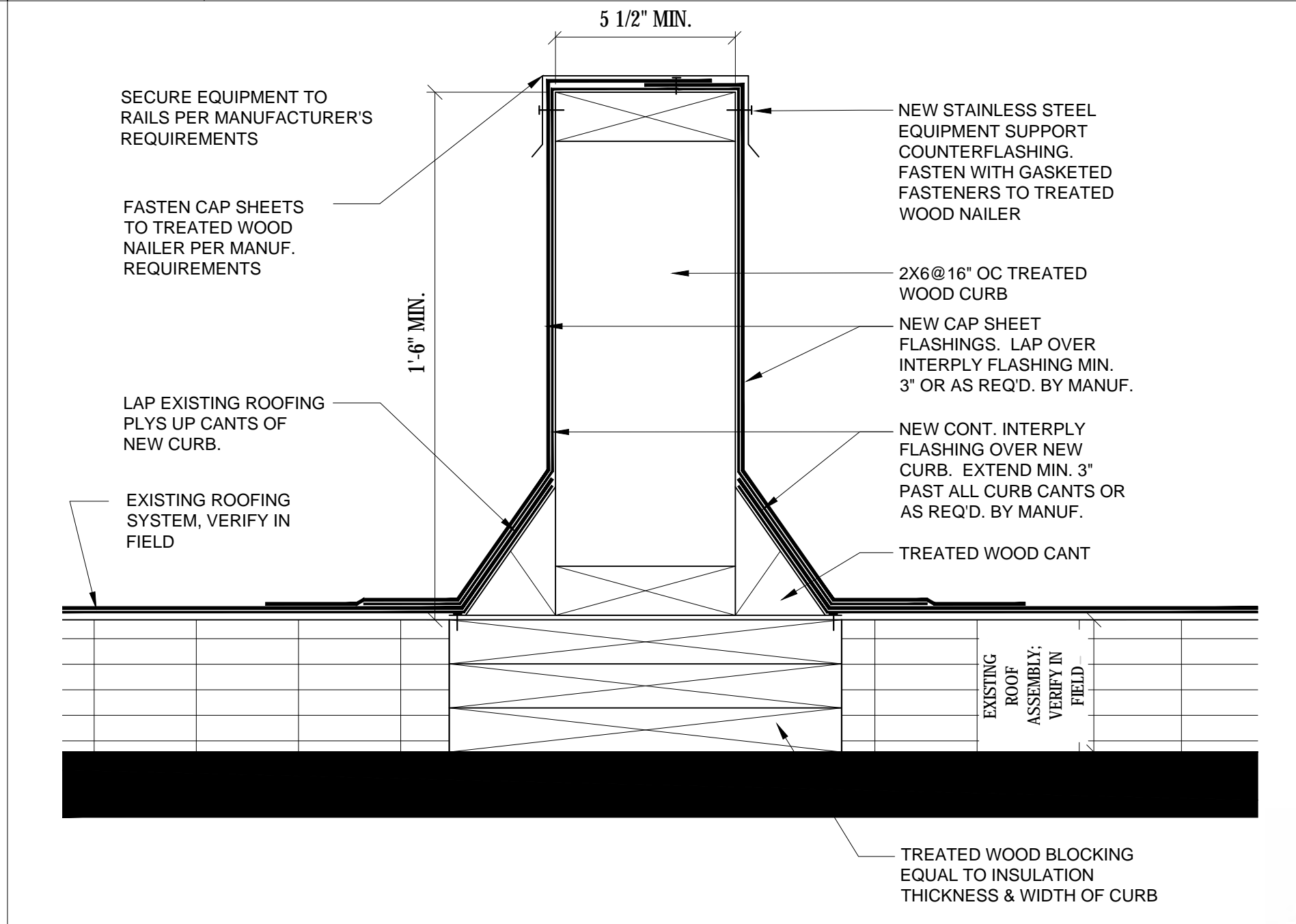
**A1** PLAN DETAIL AT COLUMN Q-16  
1-1/2"=1'-0" A3.01



**A5** PLAN DETAIL AT COLUMN Q-19  
1-1/2"=1'-0" A3.01



**A9** SECTION DETAIL AT EXTERIOR WALL  
1-1/2"=1'-0" A3.01



**A13** SECTION THRU CURB AT ROOFTOP EQUIPMENT  
3"=1'-0" A3.01

KEY PLAN

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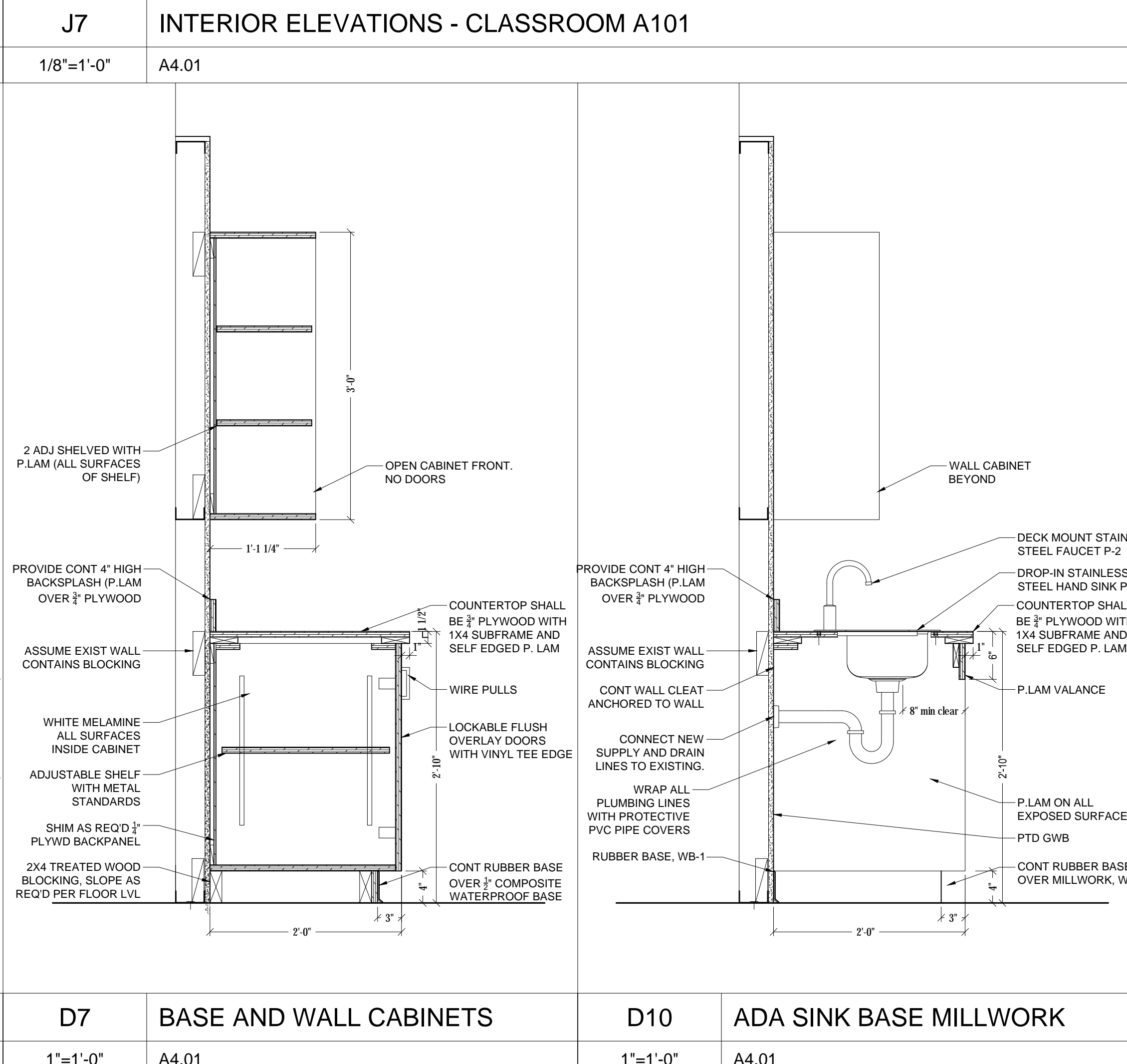
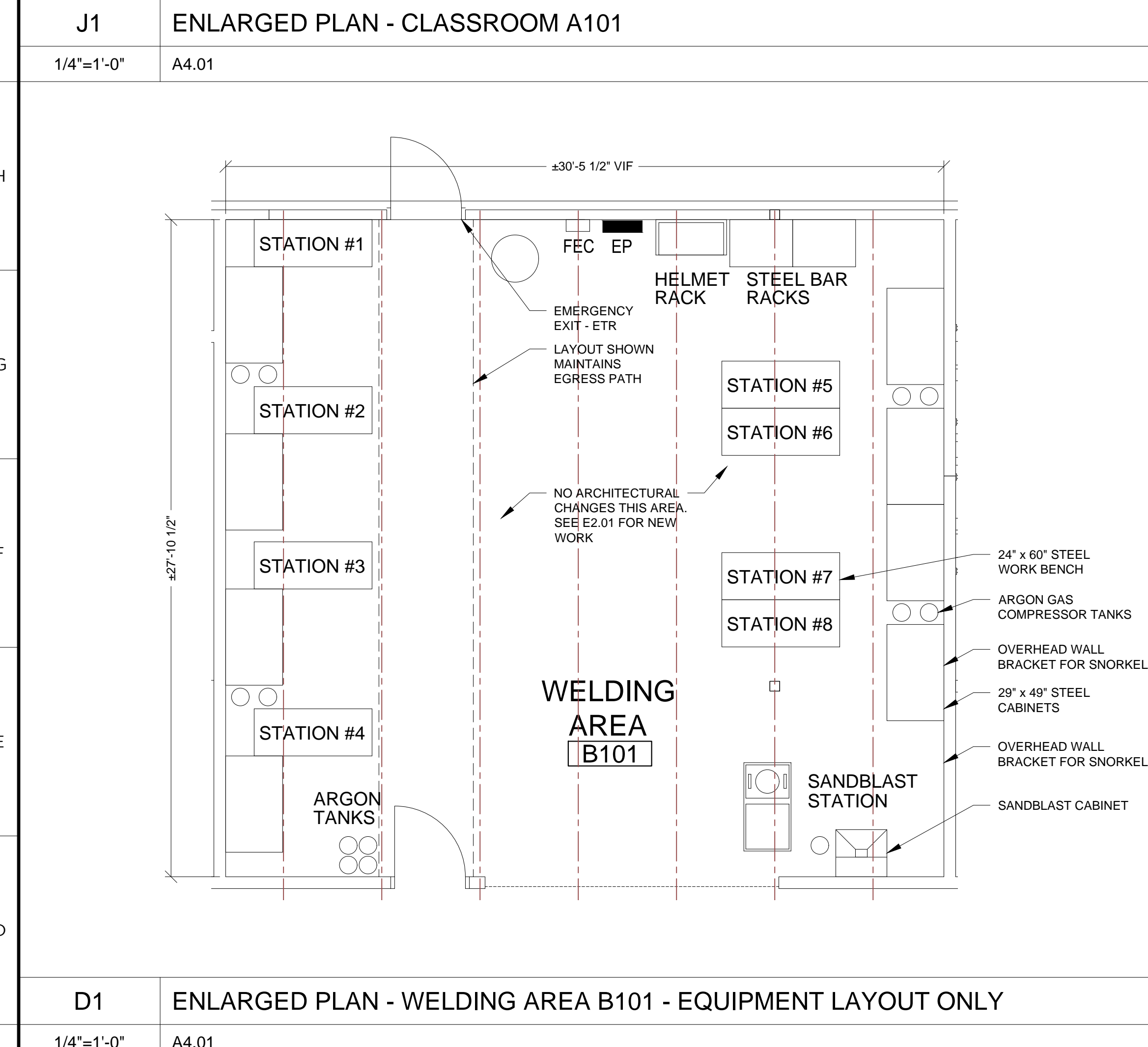
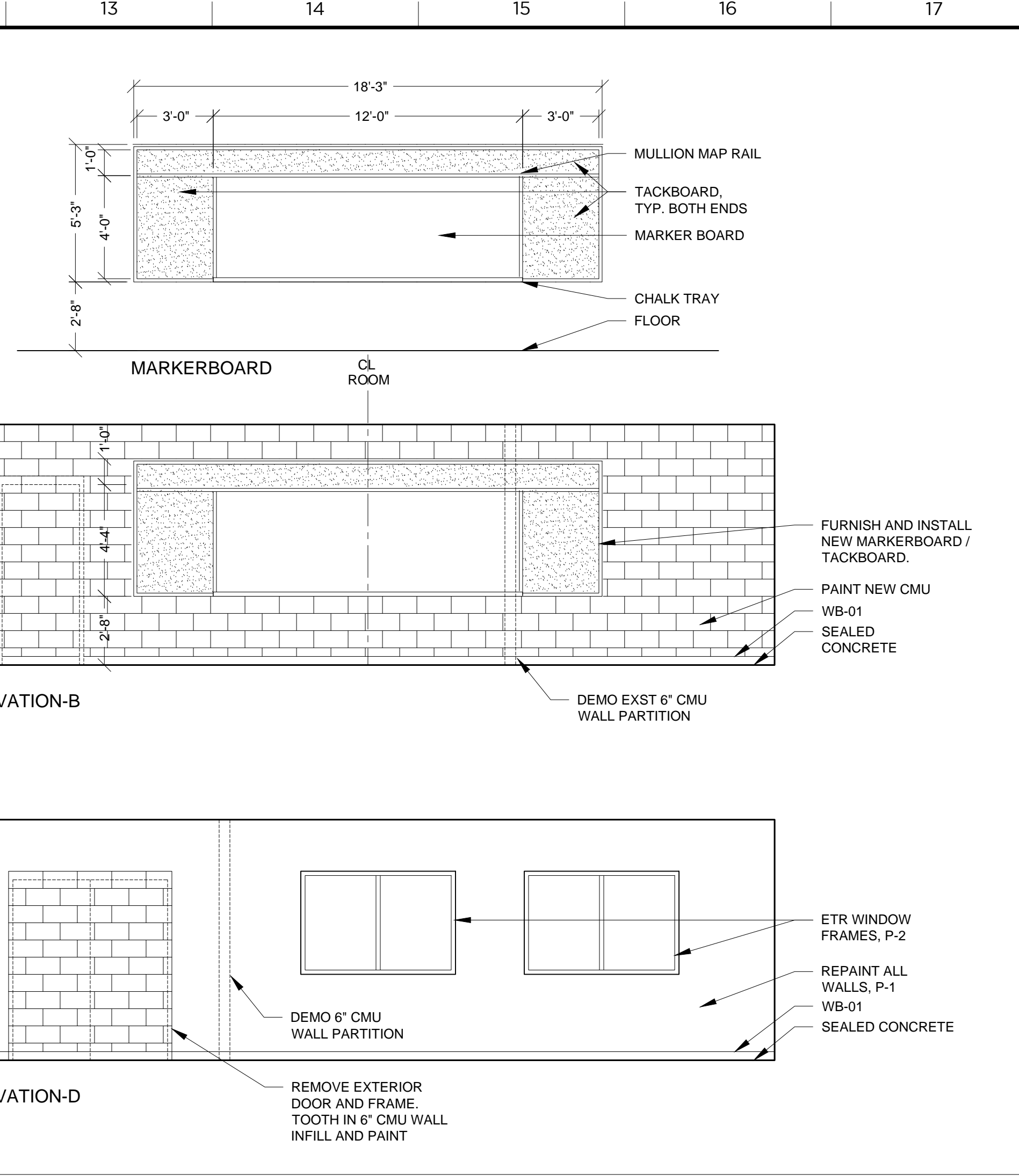
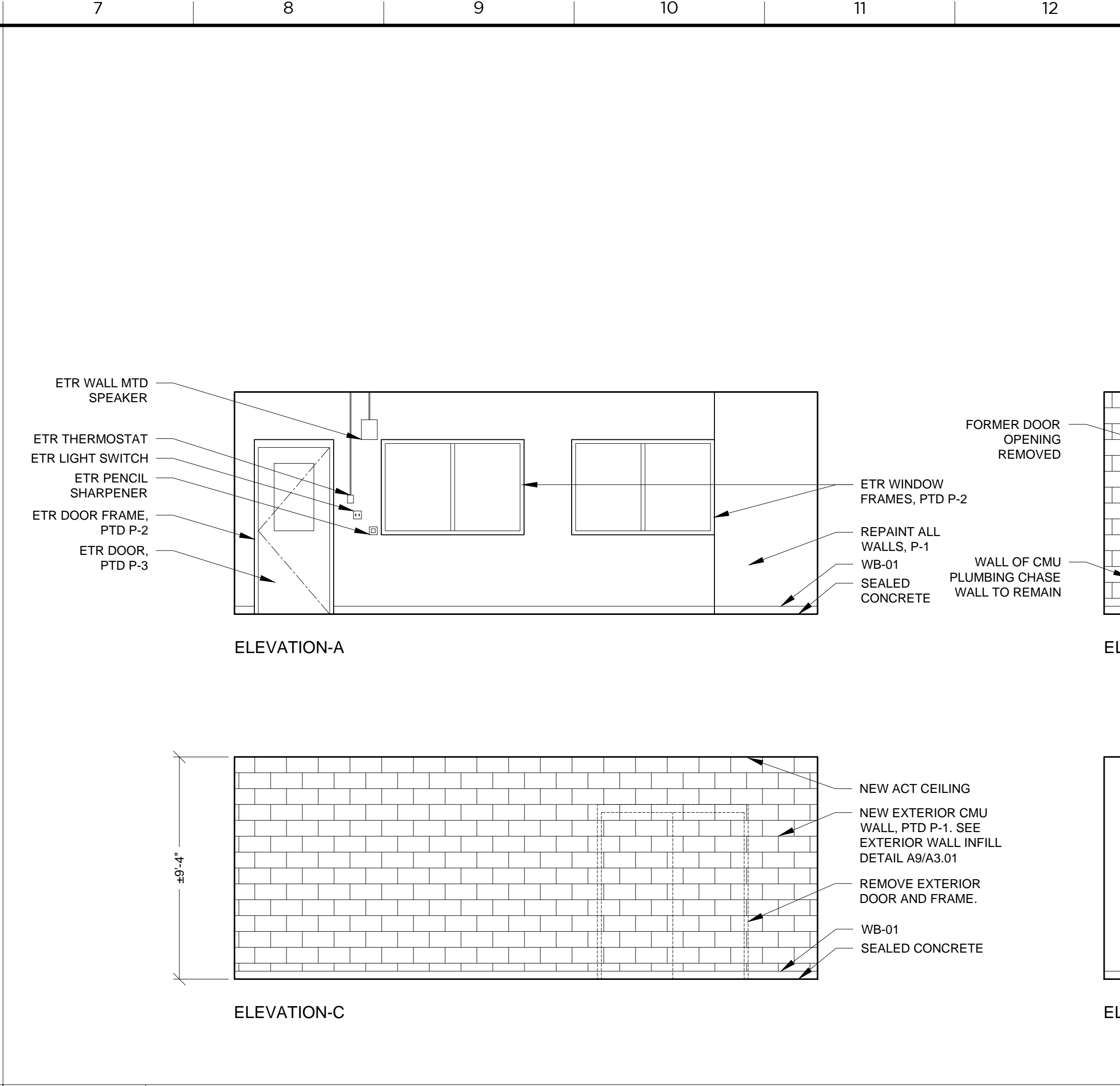
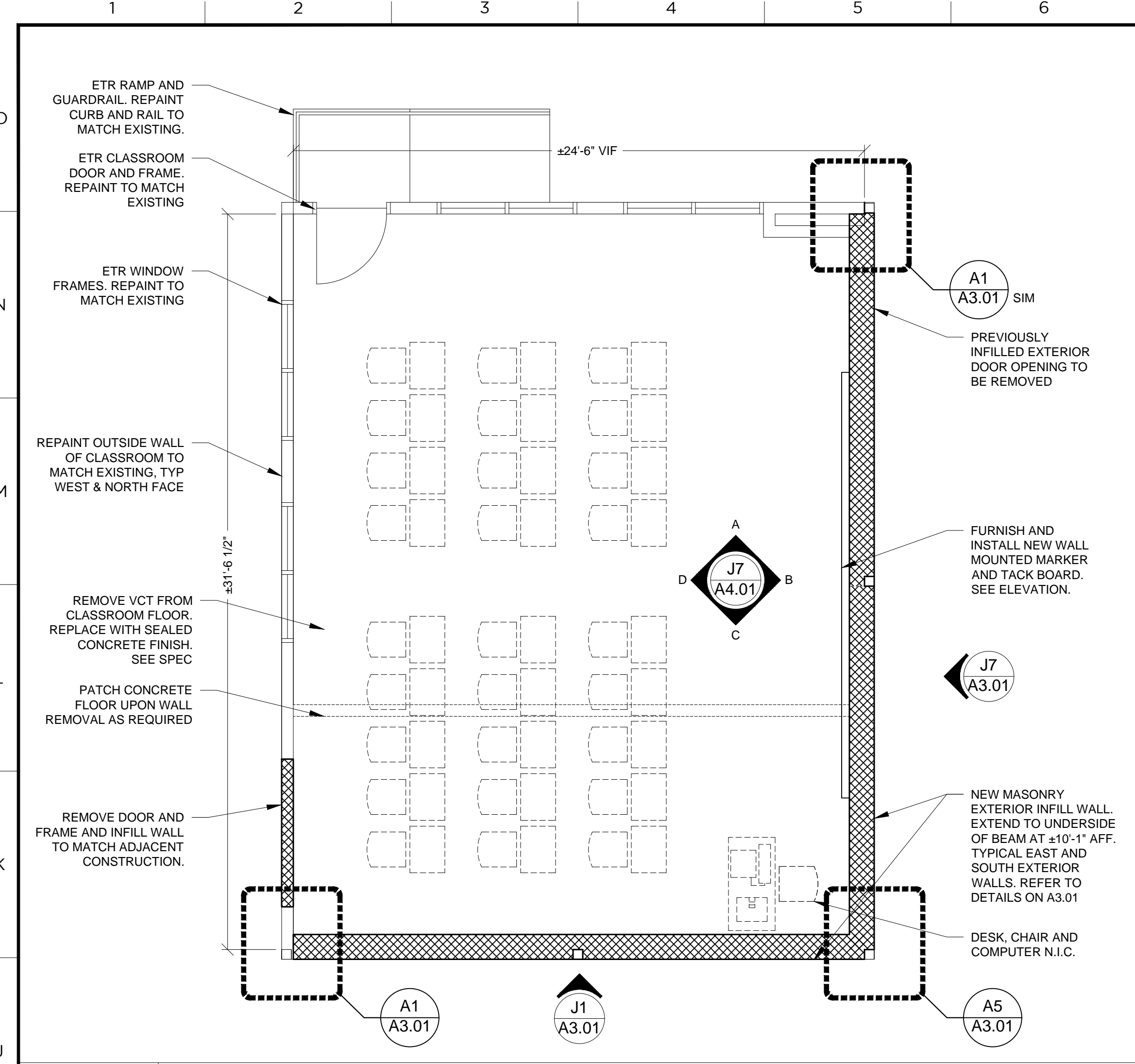
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**DRAWING TITLE**  
FIRST FLOOR  
NEW WORK PLAN

SEAL	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	
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	SCALE		

**A3.01**



**ROOM FINISH SCHEDULE:**

MARK	ROOM NAME	TYP FLOOR	TYP BASE	WALLS				CLG	NOTES
				N	E	S	W		
A101	CLASSROOM 1	CONCRETE	WB-1	P-1	P-1	P-1	P-1	ACT-1	*SEE NOTE ON POLISHED CONC FLR
A102	AUTO BAY 1	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
A103	AUTO BAY 2	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
A104	AUTO BAY 3	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
A105	CLASSROOM 2	SEE NOTE*	ETR	ETR	ETR	ETR	ETR	ETR	ADD ALTER #1- POLISHED CONC FLR
B101	WELDING	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
B104	DIAGNOSTIC AREA	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
B105	ENGINE AREA	ETR	ETR	ETR	ETR	ETR	ETR	ETR	
B106	CLASSROOM 3	SEE NOTE*	ETR	ETR	ETR	ETR	ETR	ETR	ADD ALTER #1- POLISHED CONC FLR
B107	SINK AREA	ETR	ETR	ETR	ETR	ETR	P-1*	ETR	*REPAIR WALL BEHIND NEW CASEWK

**GENERAL NOTES**

- SCHEDULE TO BE USED IN COMBINATION WITH DRAWINGS. SEE ELEVATIONS FOR PAINT LOCATIONS.
- ALL PRODUCTS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR TO CONFIRM MATCH OF ALL FINISH SELECTIONS WITH FIELD CONDITIONS.
- PROVIDE SUBMITTAL SAMPLES FOR ALL MATERIALS FOR ARCHITECT'S APPROVAL.
- CONTRACTOR TO ASSUME TOUCH UP PAINTING REQUIRED ON STEEL STRUCTURE IN AREAS AFFECTED BY NEW WORK
- REMOVE VCT ON CLASSROOM FLOOR, GRIND SMOOTH, APPLY CLEAR SEALER AND POLISH, PER SPEC.

**MATERIAL SPECIFICATIONS**

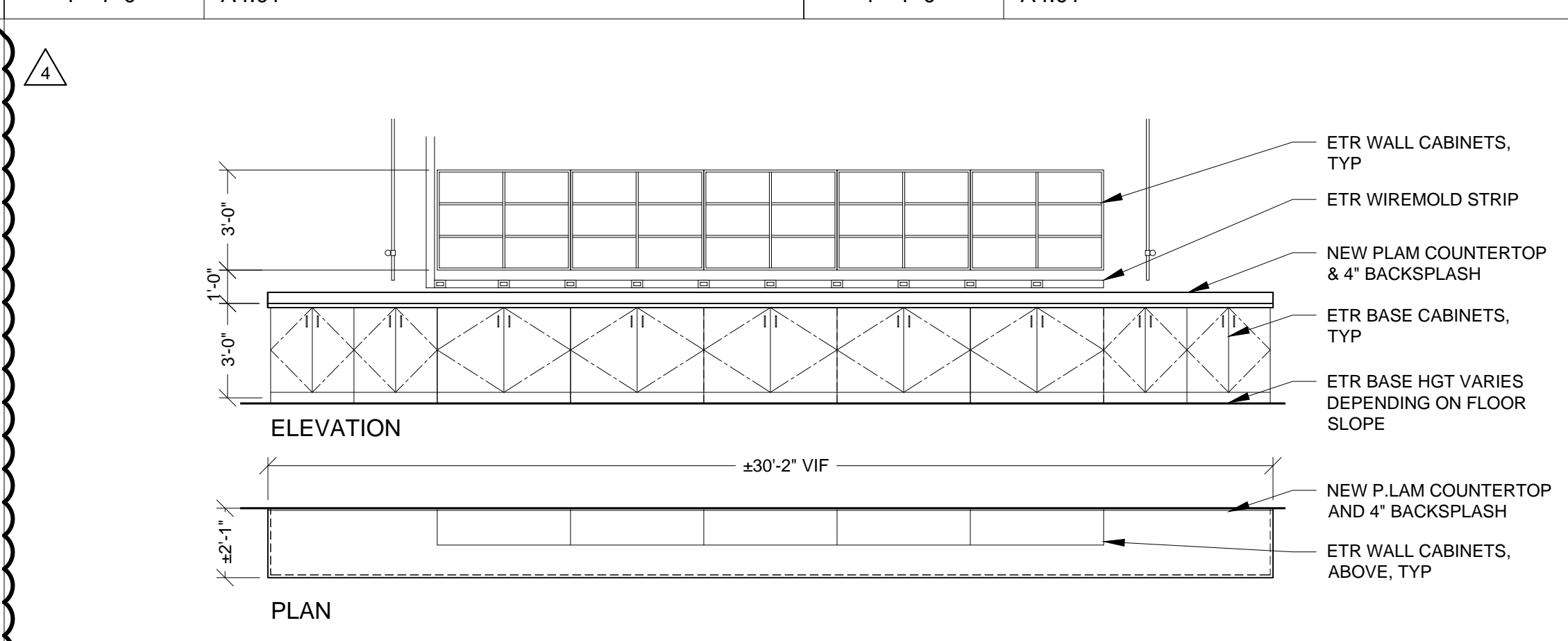
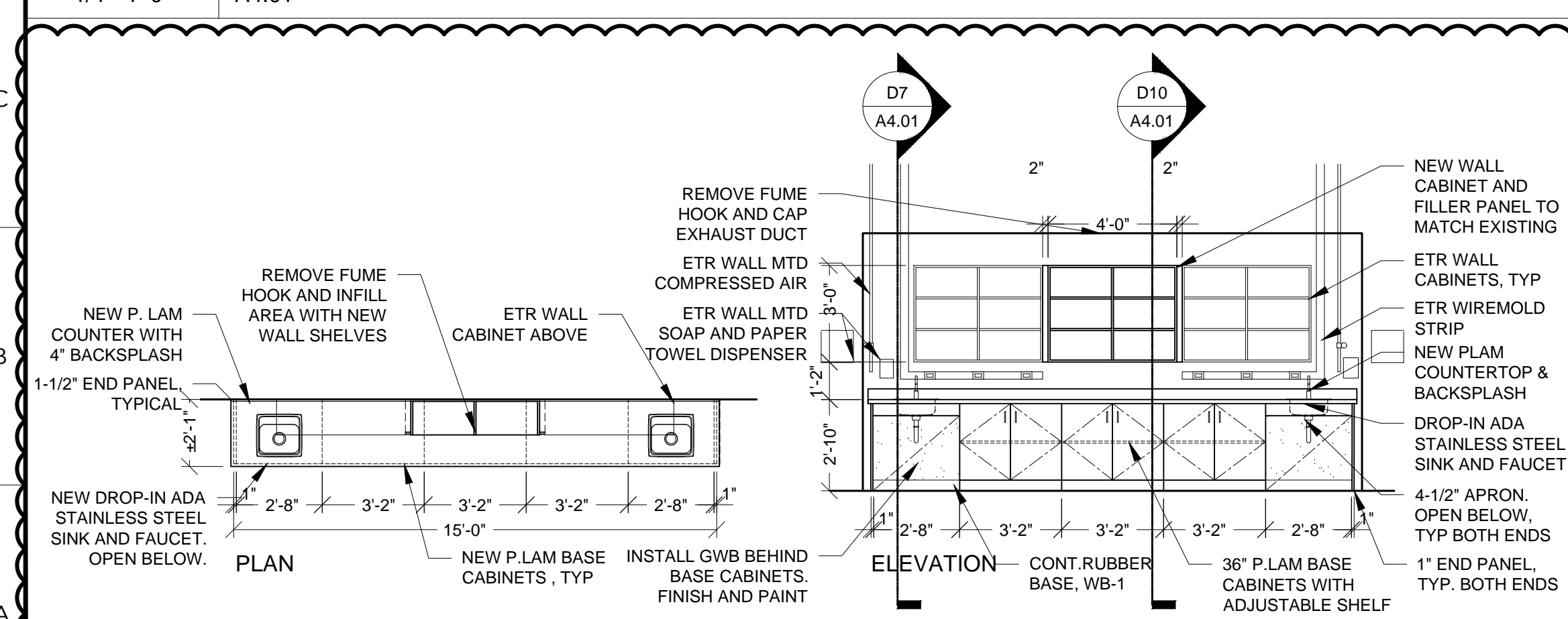
ACT-1: CLASSROOM CEILING;	USG   LINE: RADAR BASIC ACOUSTICAL PANELS   ITEM #2110   SQUARE EDGE CLASS A   0.55 NRC / 33 CAC   SIZE 24" X 24"   COLOR: WHITE   SUSPENSION SYSTEM: USG DX
PLAM-1: BASE / WALL CABINETS	WILSONART H.P. LAMINATE   COLOR: WHITE NEBULA   #4621-60
PLAM-2: COUNTERTOPS	WILSONART H.P. LAMINATE   COLOR: PEWTER BRUSH   #4779-60
WB-1: WALL BASE	JOHNSONITE 4" RUBBER COVE BASE   COLOR: #40 BLACK B
CMU-1: INTERIOR CONCRETE BLOCK	YORK STANDARD MASONRY UNITS - 6"x8"x16"
CMU-2: EXTERIOR SPLIT FACE BLOCK	YORK ARCHITECTURAL SPLIT FACE CMU WITH INTEGRAL WATER REPELLANT   COLOR: SANDSTONE

**PAINT SPECIFICATIONS**

MARK	MANUFACTURER	COLOR	CODE #	FINISH	NOTES
P-1	SHERWIN WILLIAMS	PURE WHITE	SW 7005	EG-SHEL	CLASSRM WALLS, SHOP UPPER WALLS
P-2	SHERWIN WILLIAMS	SAFETY RED	SW 4081	EG-SHEL	DOOR FRAMES, WINDOW FRAMES, STRIPE & RAILINGS
P-3	SHERWIN WILLIAMS	ANONYMOUS	SW 7046	EG-SHEL	DOORS, SHOP LOWER WALLS
P-4	SHERWIN WILLIAMS	COLOR MATCH	TBD	SATIN	EXTERIOR STEEL STRUCTURE

**NOTES**

- SHEEN FOR CEILING: FLAT
- SHEEN FOR GYP BOARD AND CMU WALLS: LOW SHEEN/EG-SHEL
- SHEEN FOR METAL TRIM: SEMI-GLOSS
- USE SHERWIN WILLIAMS PROMAR 200 SERIES LOW VOC INTERIOR LATEX FOR GYPSUM WALLBOARD
- USE SHERWIN WILLIAMS LONCON SERIES INTERIOR LATEX FOR CMU SUBSTRATES
- USE SHERWIN WILLIAMS PRO INDUSTRIAL ALKYD URETHANE ENAMEL FOR STEEL SUBSTRATES
- USE TINTED PRIMER WHERE APPLICABLE
- FOLLOW MANUFACTURER INSTRUCTIONS FOR ALL APPLICATIONS.
- PROJECT MANAGER TO APPROVE ALL DRAW DOWNS BEFORE RELEASE.
- CONFIRM SHEEN ON ALL PAINTS WITH EXISTING CONDITIONS



**A14 SCHEDULES**  
 N/A A4.01

**KEY PLAN**

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**DRAWING TITLE**  
 FIRST FLOOR  
 NEW WORK PLAN

**SCALE**  
 03/28/2023

**PROJECT #**  
 23001.00

**DRAWING #**  
 A4.01

# GENERAL NOTES

## CONCRETE:

- NOTE: 1**  
ALL CONCRETE SHALL BE f<sub>c</sub>=3000 PSI NORMAL WEIGHT CONCRETE AT 28 DAYS.
- NOTE: 2**  
ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 (LATEST LOCAL APPROVED EDITION), GRADE 60. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI SP-88, "ACI DETAILING MANUAL" (LATEST LOCAL APPROVED EDITION).
- NOTE: 3**  
ALL SPLICES IN REINFORCING SHALL BE CLASS "B" SPLICES IN ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (LATEST LOCAL APPROVED EDITION) EXCEPT AS OTHERWISE NOTED.
- NOTE: 4**  
THE CONTRACTOR MUST SUBMIT A CONCRETE DESIGN MIX IN ACCORDANCE WITH ACI 318 (LATEST LOCAL APPROVED EDITION). SUCH DESIGN MIX SHALL BE ACCOMPANIED BY THE APPROPRIATE GRAPHS AND BACKGROUND DATA. CONCRETE DESIGN MIX SHALL INDICATE 7 AND 28 DAY STRENGTHS, CEMENT CONTENT, WATER-CEMENT RATIO, FINE AND COARSE AGGREGATES AND ADMIXTURES FOR EACH DESIGN STRENGTH. THE ADDITION OF WATER AT THE PLANT OR IN THE FIELD GREATER THAN THE SPECIFIED WATER CONTENT IS STRICTLY PROHIBITED.
- NOTE: 5**  
ALL CONCRETE WORK SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF THE FOLLOWING ACI AND ASTM DOCUMENTS:  
• ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE  
• ACI-318 CODE  
• ACI-214 COMPRESSIVE TEST  
• ACI-306 COLD WEATHER  
• ACI SP-88 DETAILING  
• ACI-347 FORMWORK  
• ACI-305 HOT WEATHER  
• ACI-211 PROPORTIONS OF CONCRETE  
• ACI-304 PLACING CONCRETE  
• ASTM C-94 READY-MIX CONCRETE
- NOTE: 6**  
ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST LOCAL APPROVED EDITIONS OF ASTM:  
• ASTM C-31 FIELD CYLINDER SPECIMENS  
• ASTM C-143 SLUMP TEST  
• ASTM C-231 AIR CONTENT (WHEN REQUIRED)  
• ASTM C-39 LAB TESTING CYLINDERS  
• ASTM C-172 SAMPLING FRESH CONCRETE  
• ASTM C-42 HARDENED CORES (WHEN REQUIRED)  
TEST RESULTS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE LOCAL JURISDICTION.

## MISCELLANEOUS:

- NOTE: 1**  
ITEMS AND CONDITIONS NOTED OR IDENTIFIED IN SECTIONS AND DETAILS APPLY TO AREAS SIMILAR IN CONDITION TO THOSE DENOTED BY THE SECTION CUT OR DETAIL MARK.
- NOTE: 2**  
THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.
- NOTE: 3**  
SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE FIRM COLUMBIA ENGINEERING, INC., WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND/OR THE DESIGN OF THE PROJECT. AT THE TIME OF SHOP DRAWING SUBMISSION, THE CONTRACTOR SHALL STATE IN WRITING ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMISSION AND MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY AND SHALL CERTIFY ON EACH DRAWING AS FOLLOWS: "I CERTIFY THAT THE CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET, AND ALL DIMENSIONS, CONDITIONS, AND QUANTITIES ARE VERIFIED AS SHOWN AND/OR AS CORRECTED ON THIS DRAWING."
- SIGNED: \_\_\_\_\_  
(FOR CONTRACTOR)
- NOTE: 4**  
REPRODUCTION OF CONTRACT DOCUMENTS WILL NOT BE ACCEPTED AS SHOP DRAWINGS.
- NOTE: 5**  
SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED FOR ARCHITECT/ENGINEER REVIEW:  
a. CONCRETE/GROUT MIX DESIGNS  
b. CONCRETE REINFORCING STEEL  
c. STRUCTURAL STEEL  
SEE SPECIFICATIONS FOR ADDITIONAL REQUIRED SUBMITTALS.
- NOTE: 6**  
ALL SHOP DRAWINGS USED FOR WORK SHALL BEAR THE STAMP OF THE ARCHITECT/ENGINEER, AND SHALL BE MARKED "REVIEWED" OR "REVIEWED AS NOTED."
- NOTE: 7**  
LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOADS FOR 28 DAYS, UNLESS THE DESIGN STRENGTH IS ACHIEVED EARLIER BASED ON FIELD CURED CYLINDERS.
- NOTE: 8**  
ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 (EXCEPTIONS NOTED SHALL NOT BE PERMITTED) AND ALL LOCAL ORDINANCES. INSPECTIONS REQUIRED SHALL BE PER THE STATEMENT OF SPECIAL INSPECTIONS NOTED ON THIS SHEET. THE OWNER SHALL HIRE AN EXPERIENCED, QUALIFIED INSPECTOR TO PERFORM ALL THE REQUIRED INSPECTION WORK. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION WORK AS A PART OF HIS DESIGN SERVICE. THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS, AND SUCH VISITS ARE NOT TO BE CONSTRUED AS MEETING INSPECTION REQUIREMENTS.
- NOTE: 9**  
THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE IN THE CONSTRUCTION OF WORK SIMILAR IN NATURE TO THIS PROJECT.
- NOTE: 10**  
LEGAL USE OF DOCUMENTS  
THESE DRAWINGS (COLLECTIVELY THE "DRAWINGS") WERE PREPARED BY COLUMBIA ENGINEERING, INC. AND ARE INSTRUMENTS OF PROFESSIONAL SERVICES RENDERED AND DELIVERED PURSUANT TO THE TERMS AND CONDITIONS OF A WRITTEN AGREEMENT (THE "AGREEMENT") ONLY TO THE RECIPIENT NAMED THEREIN. ANY USE OF THE DRAWINGS BY ANY PARTY WHICH IS INCONSISTENT WITH THE TERMS AND CONDITIONS OF THE AGREEMENT IS EXPRESSLY PROHIBITED. COLUMBIA ENGINEERING, INC. EXPRESSLY RESERVES ITS COPYRIGHT AND ALL INTELLECTUAL PROPERTY AND OTHER RIGHTS IN THE DRAWINGS. NO PORTION OF THE DRAWINGS ARE TO BE REPRODUCED, CHANGED OR OTHERWISE USED IN ANY FORM OR MANNER WHATSOEVER WHICH IS INCONSISTENT WITH EITHER THE AGREEMENT OR THE PURPOSES FOR WHICH THEY WERE ORIGINALLY PREPARED, NOR ARE THEY TO BE DEEMED ASSIGNED TO ANY PERSON OR ENTITY WITHOUT OBTAINING THE EXPRESS PRIOR WRITTEN PERMISSION AND CONSENT OF COLUMBIA ENGINEERING, INC. THE RECIPIENT OF THE DRAWINGS AGREES TO INDEMNIFY AND HOLD HARMLESS COLUMBIA ENGINEERING, INC., ITS EMPLOYEES, OFFICERS, DIRECTORS AND AGENTS, FROM AND AGAINST ANY AND ALL DAMAGES WHICH ARISE OUT OF OR IN CONNECTION WITH ANY VIOLATION OF THE FOREGOING.

## MASONRY:

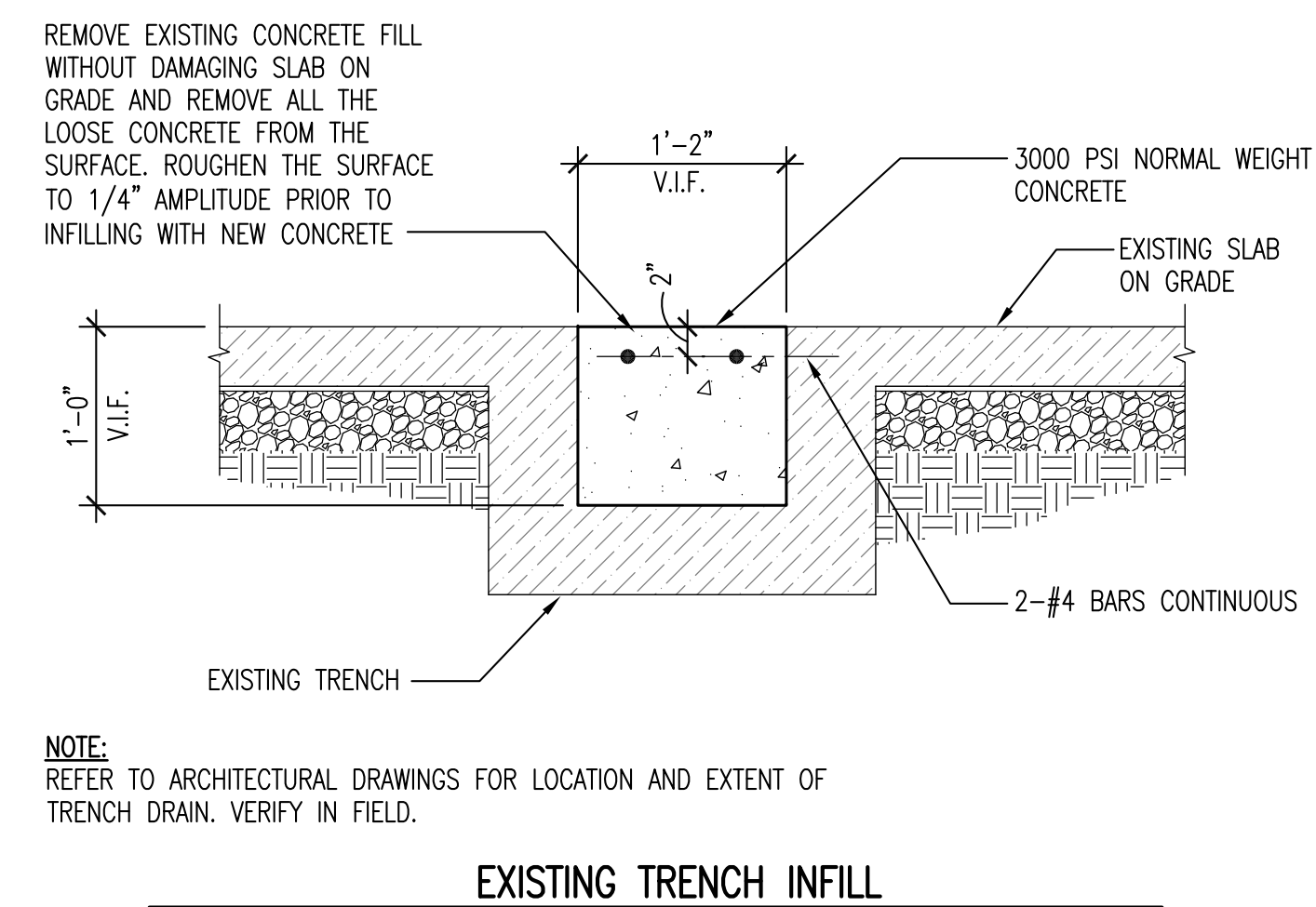
- NOTE: 1**  
TYPICAL INFILLING OF EXISTING MASONRY
- INFILLING:**  
WHERE NEW MASONRY IS TO BE ADDED, THE MASONRY SHALL BE TOOTHED AND MORTARED (SEE GUIDELINES FOR "REPAIR"), THE NEW MASONRY SHALL BEAR ON NEW CONCRETE FOUNDATIONS OR ON THE EXISTING MASONRY. IN THE LATTER CASE, THE EXISTING MASONRY SHALL BE REMOVED TO GOOD, SOLID MATERIAL. THE DRAWINGS INDICATE THE APPROXIMATE EXTENT OF THE REQUIRED MASONRY INFILL. THIS IS A GUIDE ONLY AND THE EXACT EXTENT SHALL BE DETERMINED BY THE CONTRACTOR BASED ON FIELD CONDITIONS. WHEN THE RESULTING MASONRY WOULD BE PART NEW AND PART EXISTING AND WOULD FORM A PIER OR OTHERWISE SMALL ELEMENT, REMOVE ALL THE EXISTING MASONRY AND MAKE A NEW PIER OR WALL.
- STEEL:**
- NOTE: 1**  
ALL STEEL SHALL BE SUBMITTED TO THE ARCHITECT. ALL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC MANUAL, AISC SPECIFICATION AND AISC CODE OF STANDARD PRACTICE.
- NOTE: 3**  
WELDS SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES.
- NOTE: 4**  
HOLES AND OPENINGS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.
- NOTE: 5**  
FIELD MODIFICATION OF THE STRUCTURAL STEEL IS NOT ALLOWED WITHOUT PRIOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- NOTE: 6**  
WELDING SEQUENCE AND TECHNIQUE SHALL BE SUCH THAT DISTORTION OF STEEL MEMBERS IS MINIMIZED AND UNDUPLICATE DISTORTION IS AVOIDED.

## DESIGN CODES:

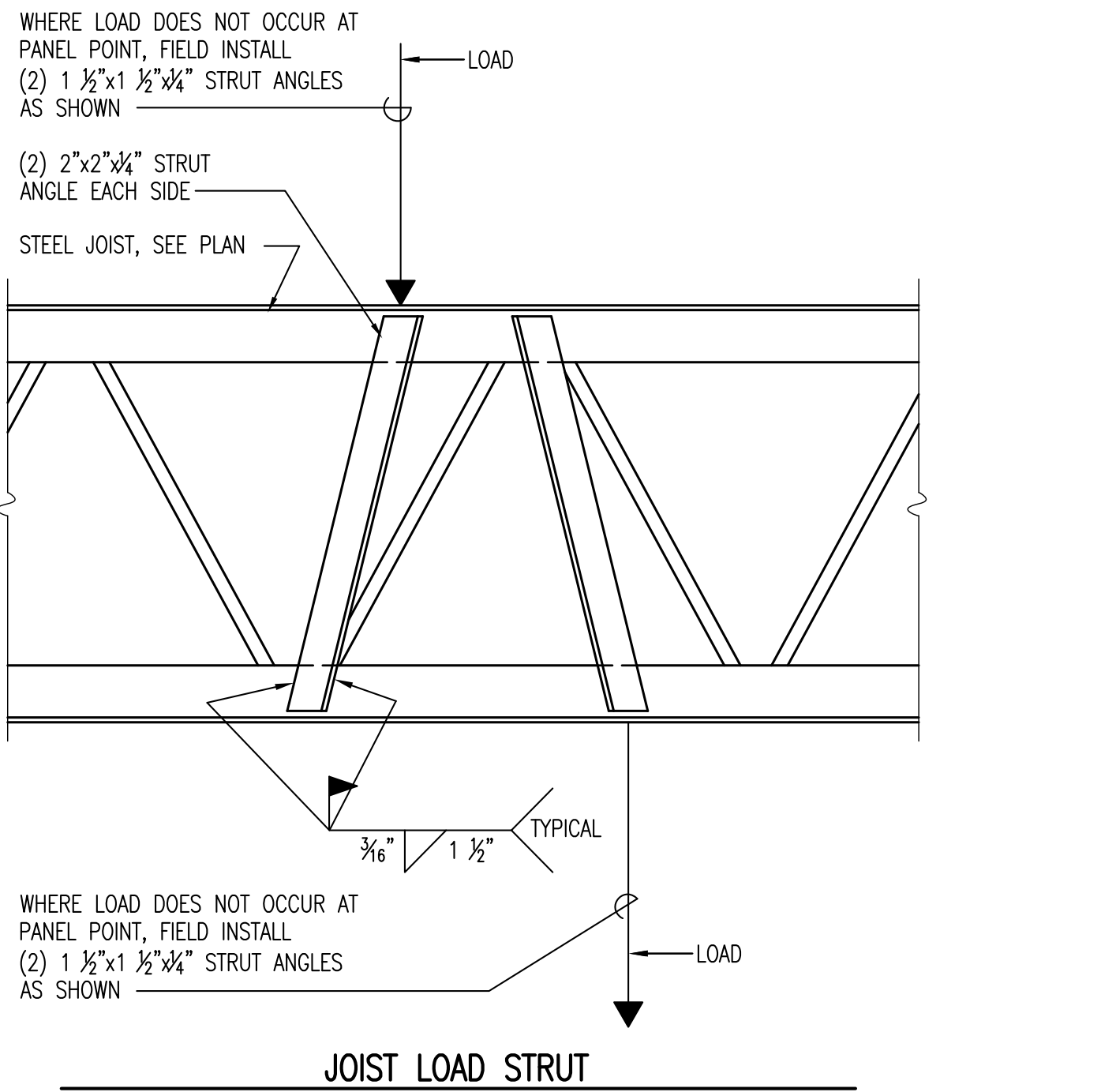
- INTERNATIONAL BUILDING CODE:  
IBC 2018
- BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE:  
ACI 318-14
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS:  
AISC 360-16
- DESIGN LOADS:**  
IBC RISK CATEGORY 3
- FLOOR LIVE LOADS:**  
1. SLAB ON GRADE — 100 PSF
- ROOF LOADS:**  
1. LIVE LOAD — 30 PSF  
2. GROUND SNOW LOAD, p<sub>g</sub> — 30 PSF  
3. FLAT ROOF SNOW LOAD, p<sub>f</sub> — 23 PSF  
4. SNOW EXPOSURE FACTOR, C<sub>e</sub> — 1.0  
5. SNOW LOAD IMPORTANCE FACTOR, I<sub>s</sub> — 1.1  
6. THERMAL FACTOR, C<sub>t</sub> — 1.0

## EXISTING CONSTRUCTION:

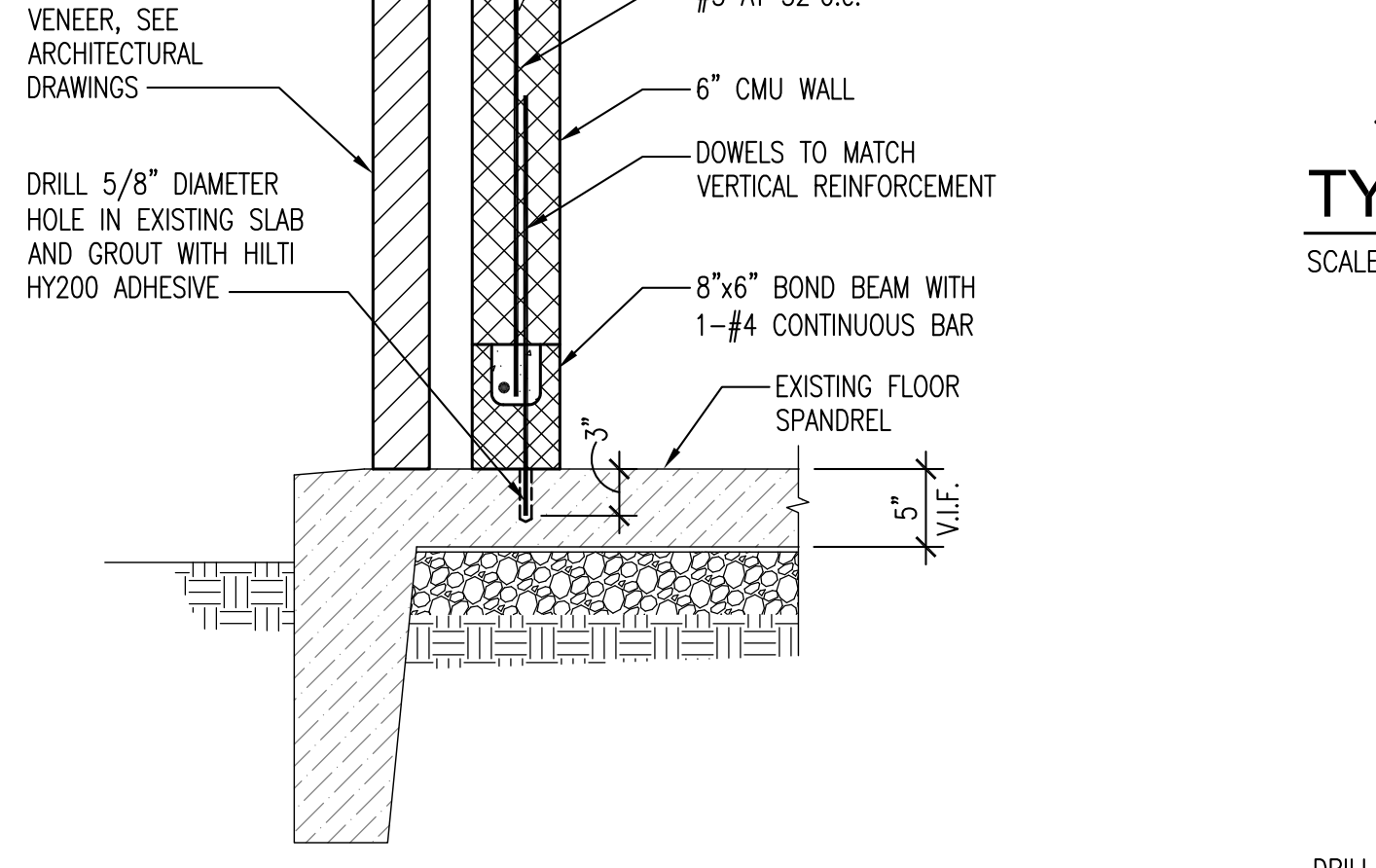
- NOTE: 1**  
COLUMBIA ENGINEERING INC. PREPARED THESE PLANS BASED ON A LIMITED AMOUNT OF FIELD EXPLORATION AND ON THE STRUCTURAL INFORMATION SHOWN IN DRAWING S-6 PREPARED BY JOHANNES & MURRAY & ASSOCIATES DATED NOVEMBER 14, 1972 AND IN DRAWING A2-01 PREPARED BY SMOLEN EMR & ASSOCIATES ARCHITECTS DATED FEBRUARY 01, 2006. THE EXISTING MEMBER SIZES ARE NOTED (E) AND ARE SHOWN IN THE PLANS. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING MEMBERS SHOWN IN THE PLANS MATCH EXISTING AS BUILT CONDITIONS PRIOR TO PREPARING SHOP DRAWINGS. IF THE AS BUILT CONDITIONS DO NOT CONFORM TO THE INFORMATION SHOWN IN THE PLANS, OR IF ANY STRUCTURAL MEMBER IS FOUND TO BE IN POOR CONDITION, THE CONTRACTOR SHALL INFORM COLUMBIA ENGINEERING INC. OF THE ACTUAL SIZES AND/OR CONDITION. RE-DESIGN AND ADDITIONAL FRAMING MAY BE REQUIRED IN THAT CASE.
- NOTE: 2**  
ALL NEW PENETRATIONS THROUGH THE EXISTING ROOFS SHALL BE ACCURATELY LOCATED BY THE CONTRACTOR. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS SHOWING ALL PROPOSED OPENINGS AND SHALL SUBMIT THESE FOR REVIEW AND APPROVAL PRIOR TO CUTTING ANY OPENINGS.
- NOTE: 3**  
NEW PENETRATIONS SHOWN IN THE STRUCTURAL DRAWINGS ARE PRINCIPAL OPENINGS. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, MEP AND TELECOMMUNICATION DRAWINGS FOR ALL PENETRATIONS.
- NOTE: 4**  
ALL NEW PIPE AND DUCT PENETRATIONS SHALL BE LOCATED BY THE CONTRACTOR TO AVOID CONCRETE SLAB REINFORCEMENT AND SUPPORTING MEMBERS UNDER THE SLAB OR ROOF. IF CUTTING OF ANY REINFORCEMENT OR EXISTING SUPPORTING MEMBER CANNOT BE AVOIDED, THEN PRIOR TO CUTTING, THE CONTRACTOR SHALL PREPARE A DETAILED DRAWING SHOWING THE PROPOSED PENETRATION AND ALL THE AFFECTED REINFORCEMENT AND SUPPORTING MEMBERS AND SHALL SUBMIT THE DRAWING TO COLUMBIA ENGINEERING INC. FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT CUT ANY REINFORCEMENT OR MEMBER WITHOUT THE PRIOR APPROVAL OF COLUMBIA ENGINEERING, INC.



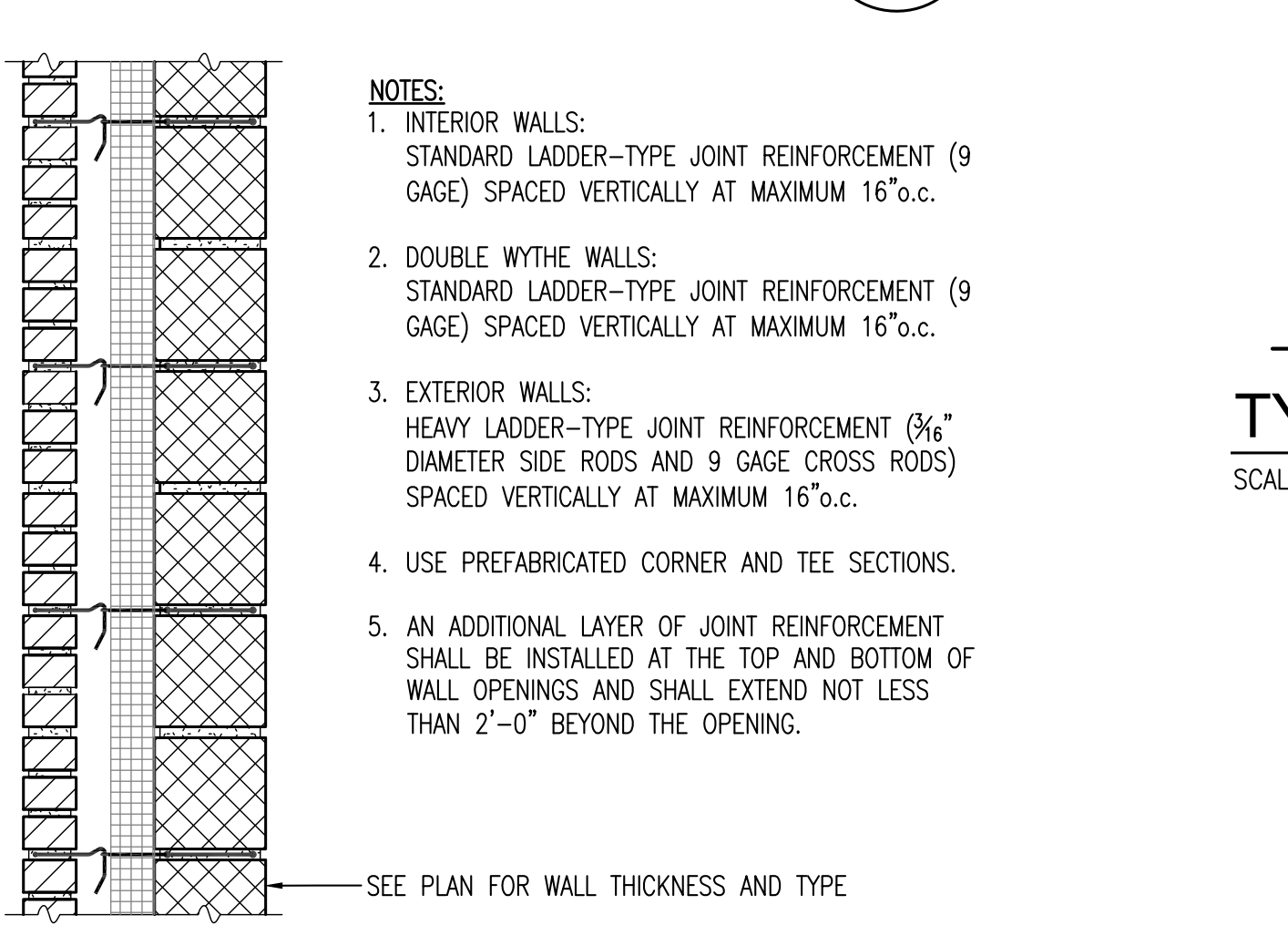
**TYPICAL DETAIL A**  
SCALE: NONE



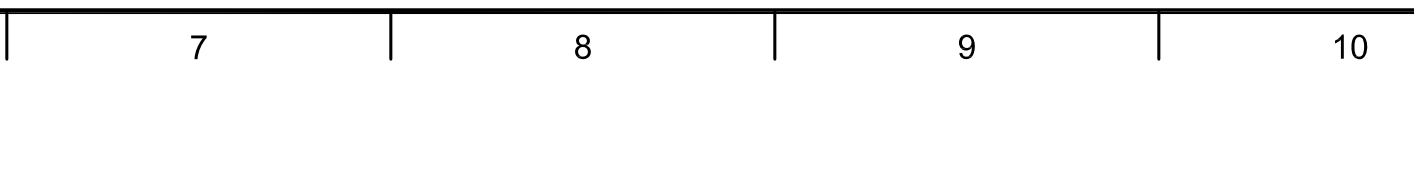
**TYPICAL DETAIL B**  
SCALE: NONE



**TYPICAL DETAIL C**  
SCALE: NONE



**TYPICAL DETAIL D**  
SCALE: NONE



**TYPICAL DETAIL E**  
SCALE: NONE



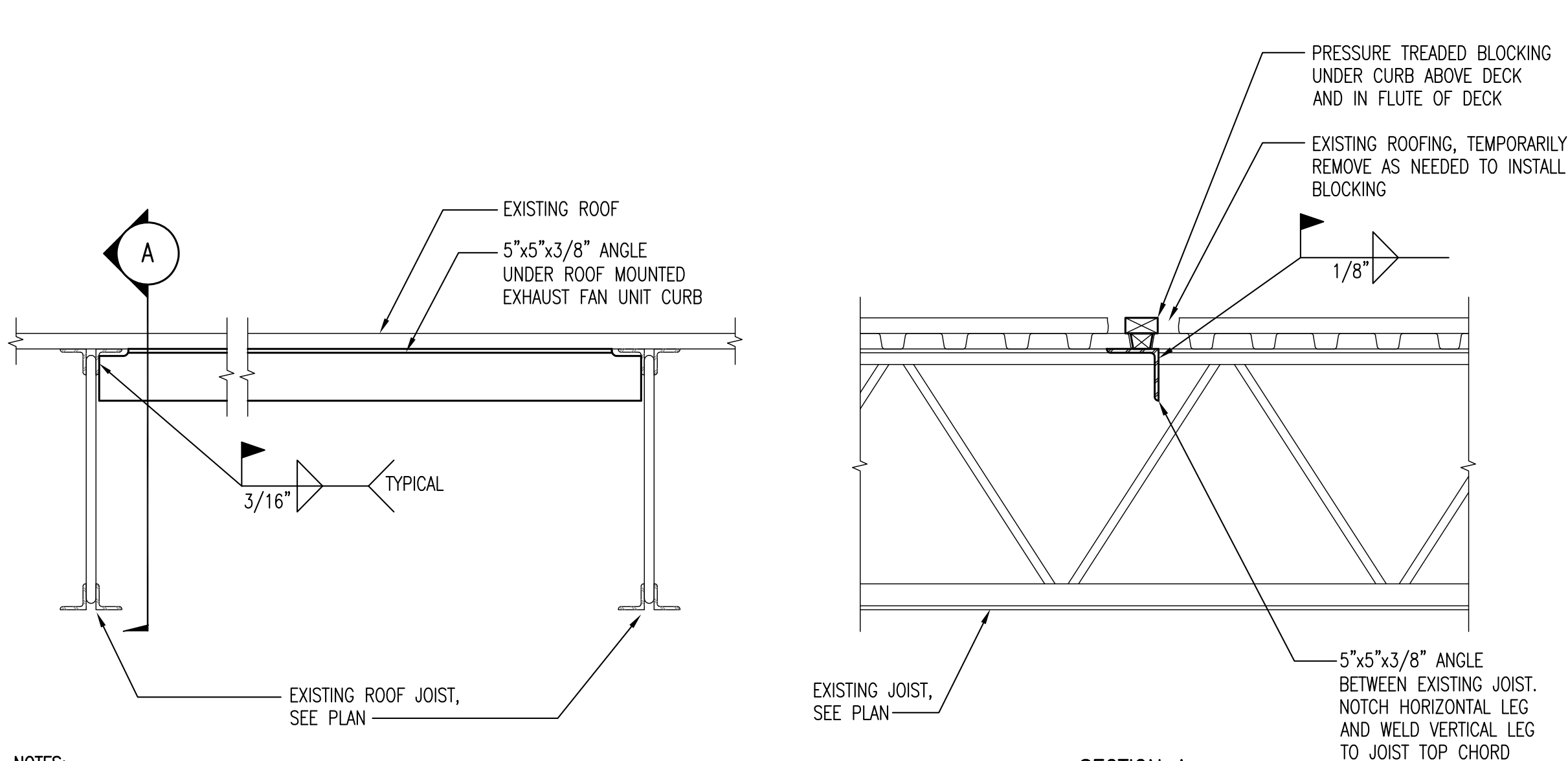
**TYPICAL DETAIL F**  
SCALE: NONE



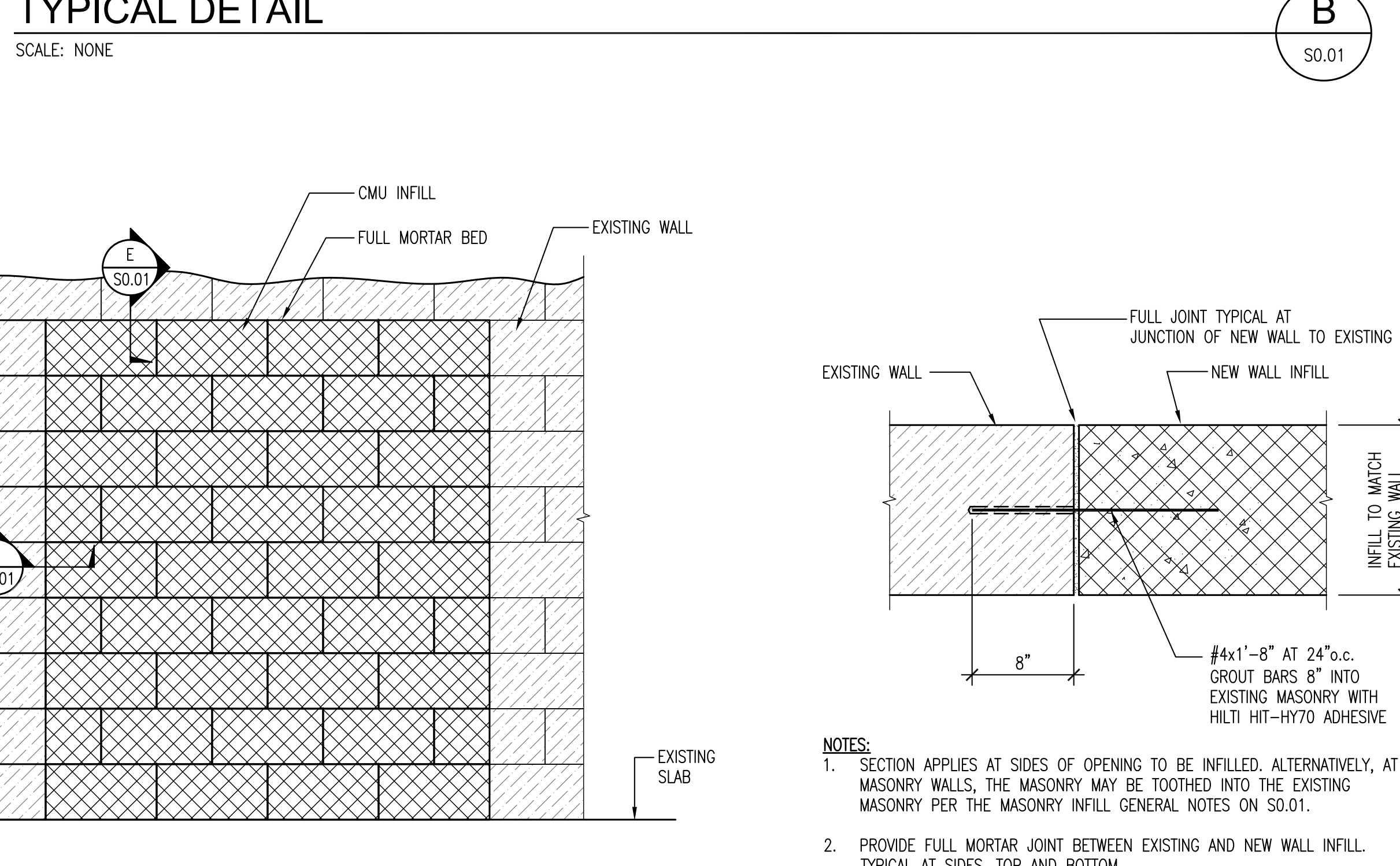
**TYPICAL DETAIL G**  
SCALE: NONE



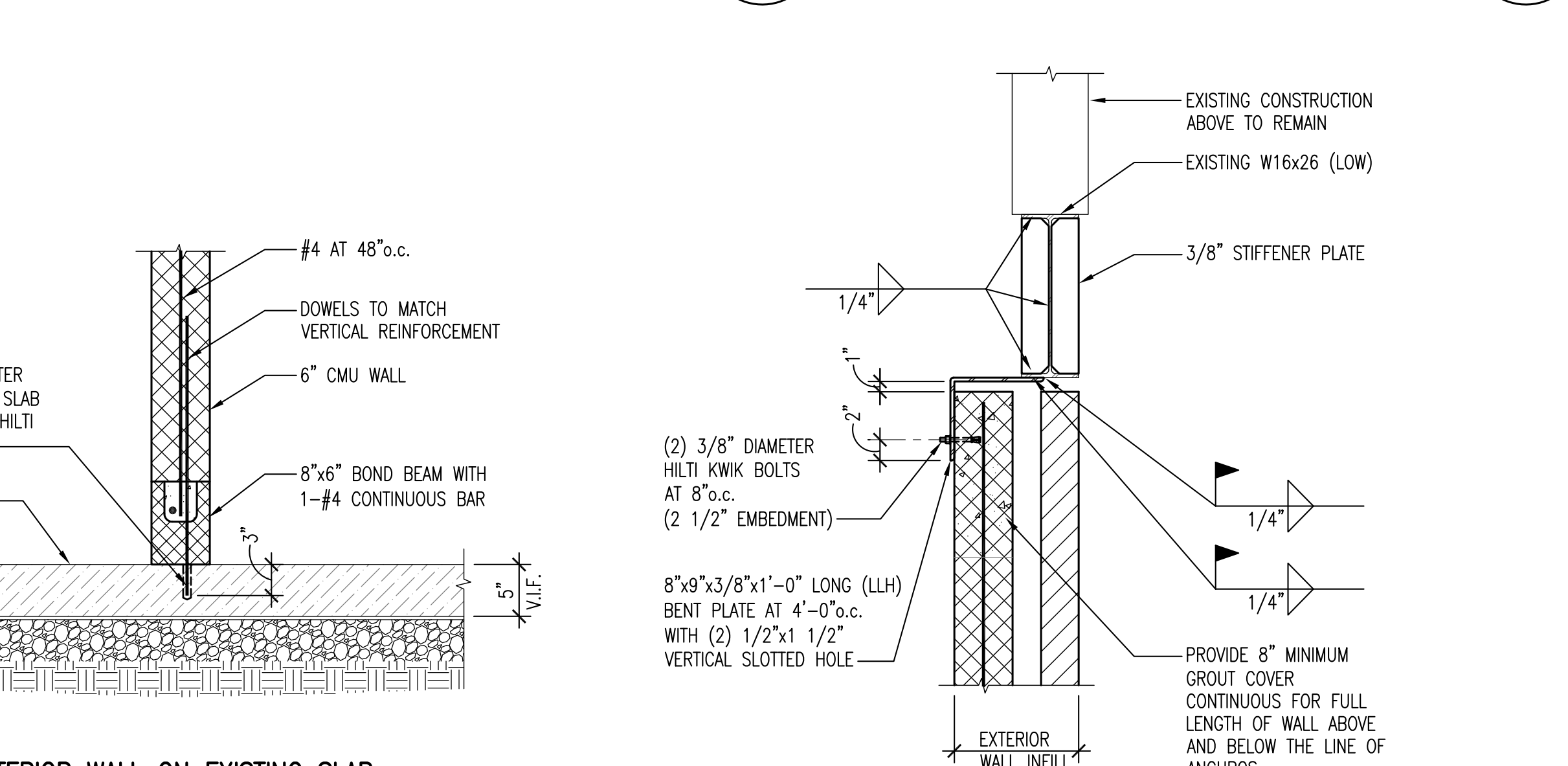
**TYPICAL DETAIL H**  
SCALE: NONE



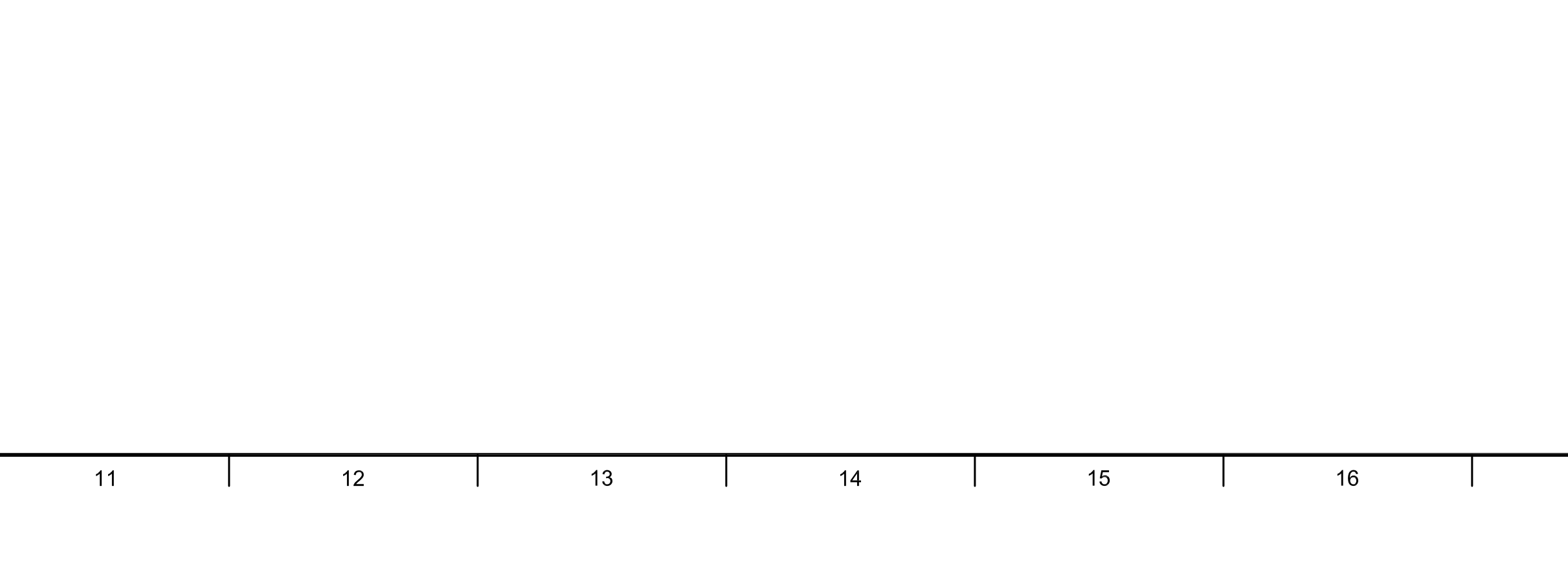
**TYPICAL DETAIL I**  
SCALE: NONE



**TYPICAL DETAIL J**  
SCALE: NONE

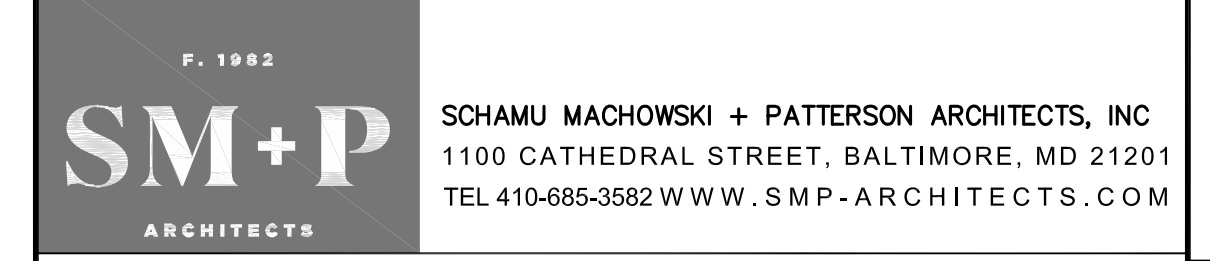


**TYPICAL DETAIL K**  
SCALE: NONE



**SECTION H**  
SCALE: 1"=1'-0"

NO	REVISION / SUBMISSION	DATE
1	75% CONSTRUCTION DOCUMENTS	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/24/2023
3	BID DOCUMENTS	4/21/2023



STRUCTURAL  
COLUMBIA ENGINEERING  
6210 OLD DOBBIN LANE, SUITE 150  
COLUMBIA, MD. 21045

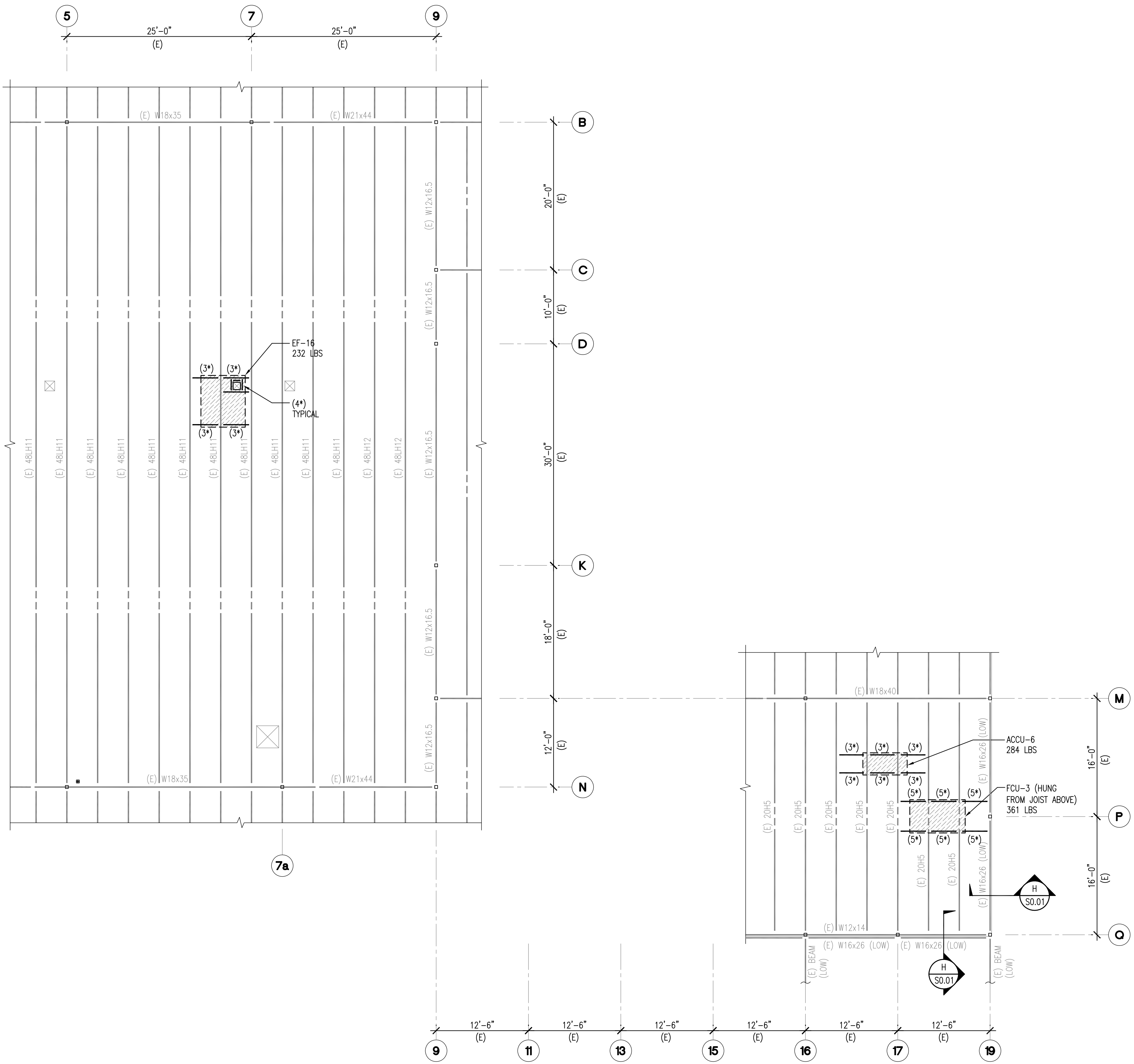
MEP  
JAMES POSEY ASSOCIATES  
11155 RED RUN BLVD,  
OWINGS MILLS, MD. 21117

Professional Certification: "I certify that these documents were prepared or approved by me, and that I am a duly licensed engineer under the laws of the State of Maryland. License No. 14479, expiration date: 06.22.2023."

PROJECT  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

DRAWING TITLE  
GENERAL NOTES AND TYPICAL DETAIL

SEAL	DRAWN	PROJECT #
		23001.00
	CHECKED	DRAWING #
		S0.01
	REVIEWED	
	DATE	04/21/2023
	SCALE	

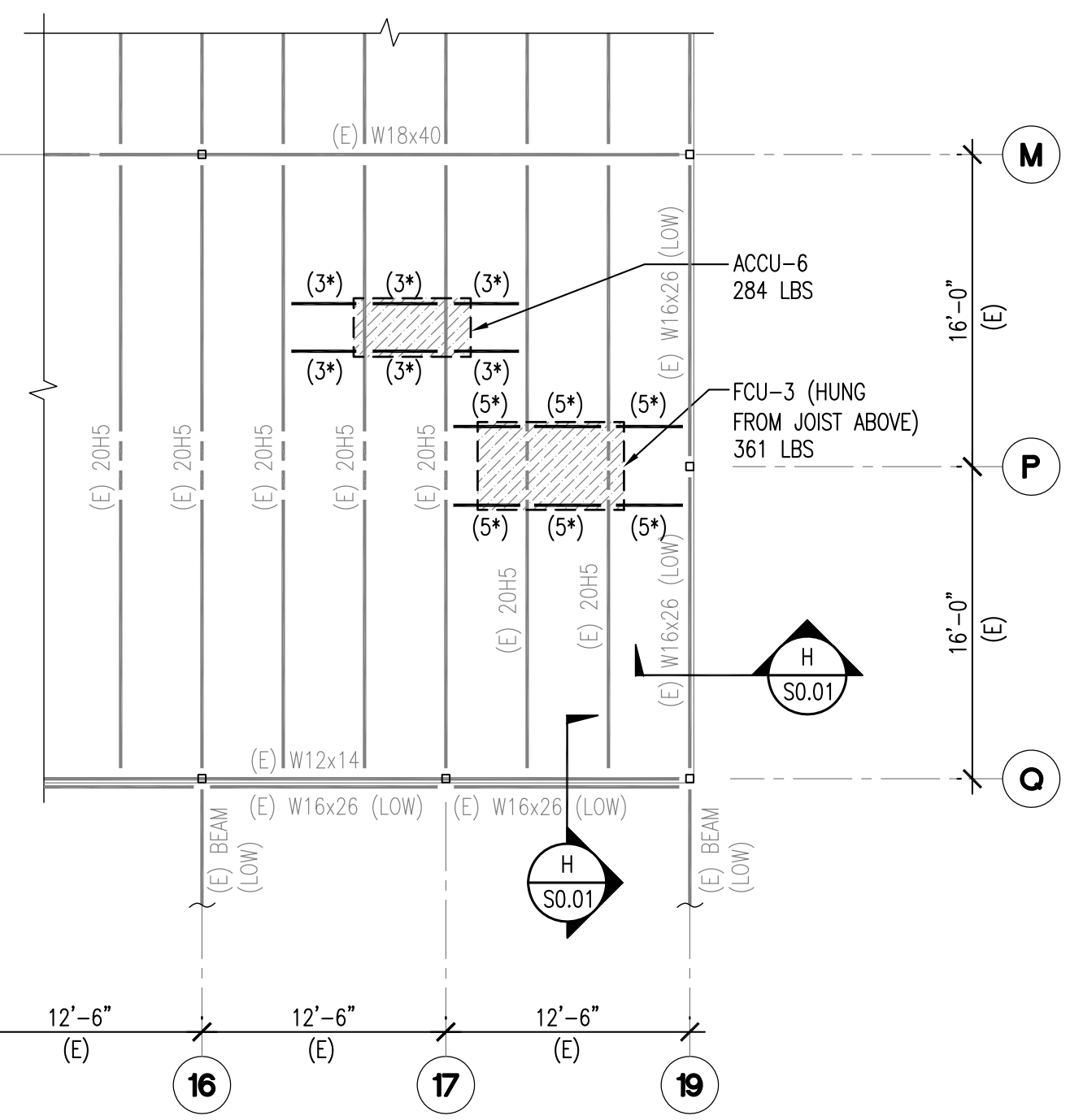


**PARTIAL ROOF FRAMING PLAN - NEW WORK**

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

**NOTES:**

- (E) DENOTES EXISTING DIMENSION OR STRUCTURAL MEMBER. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND MEMBER SIZES AND REPORT DISCREPANCIES TO COLUMBIA ENGINEERING PRIOR TO PROCEEDING WITH FABRICATION OR CONSTRUCTION.
- COORDINATE WITH MECHANICAL DRAWINGS FOR LOCATION OF THE MECHANICAL UNITS.
- (3\*) DENOTES 5"x5"x3/8" ANGLE FRAME UNDER ROOF TOP UNIT CURB. FRAME ANGLE TO EXISTING JOIST AS PER TYPICAL DETAIL B/SO.01.
- (4\*) DENOTES 3"x3"x5/16" ANGLE FRAME AROUND NEW DUCT OPENING. COORDINATE SIZES AND LOCATION WITH MECHANICAL DRAWINGS.
- (5\*) DENOTES 5"x5"x3/8" ANGLE FRAME TO SUPPORT HANGER FOR FCU-3 HUNG FROM THE ROOF STRUCTURE.

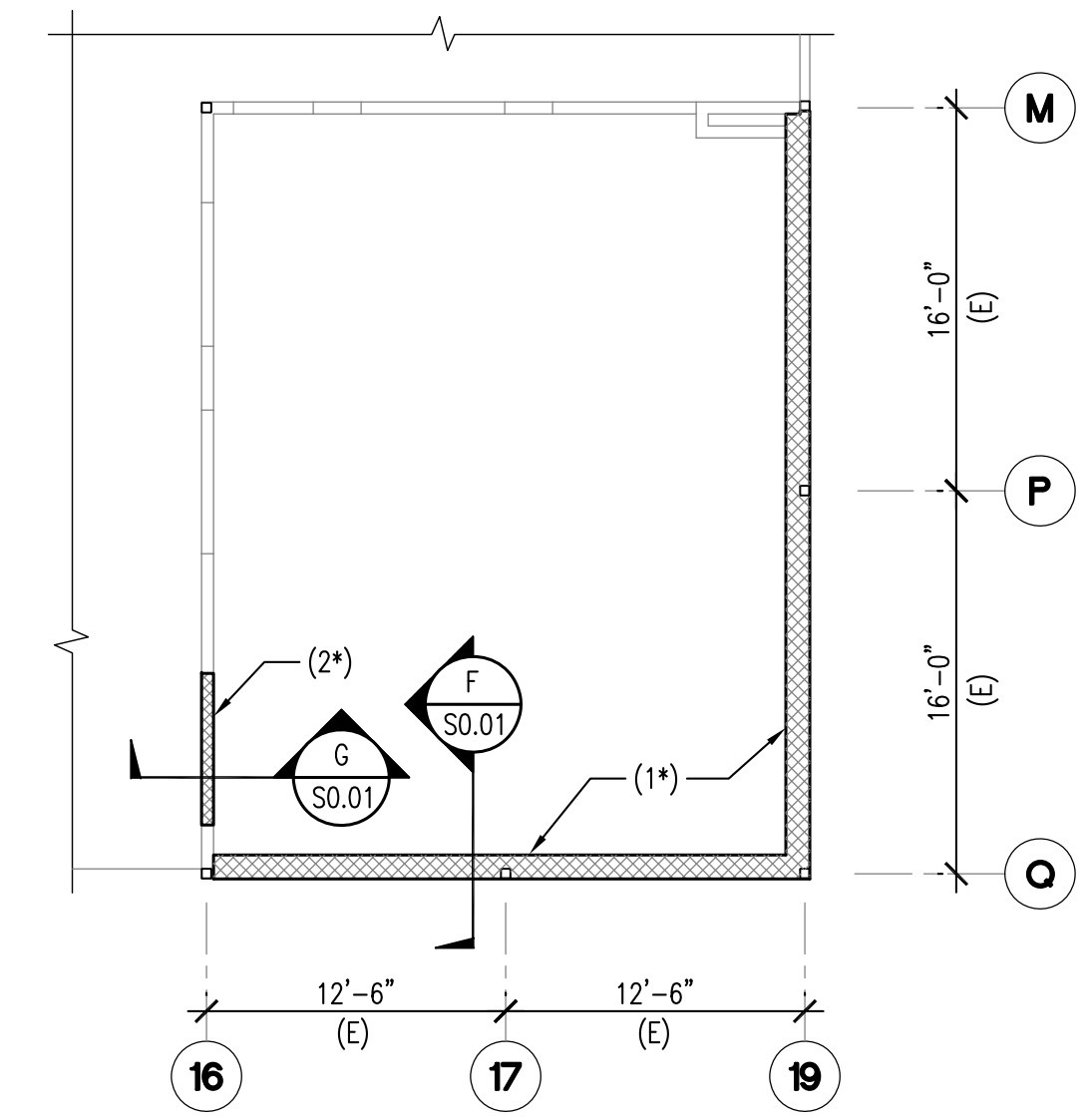


**PARTIAL FLOOR PLAN - NEW WORK**

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

**NOTES:**

- (1\*) DENOTES EXTERIOR WALL INFILL AS PER TYPICAL DETAILS D/SO.01 AND F/SO.01.
- (2\*) DENOTES INTERIOR WALL INFILL AS PER TYPICAL DETAILS D/SO.01 AND G/SO.01.
- MAKE SURE EXISTING COLUMNS ARE NOT DAMAGED DURING DEMOLITION OF EXISTING WALL.



KEY PLAN

NO	REVISION / SUBMISSION	DATE
1	75% CONSTRUCTION DOCUMENTS	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/24/2023
3	BID DOCUMENTS	4/21/2023

P. 1992  
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CONSULTANTS  
**STRUCTURAL**  
 COLUMBIA ENGINEERING  
 6210 OLD DOBBIN LANE, SUITE 150  
 COLUMBIA, MD. 21045  
**MEP**  
 JAMES POSEY ASSOCIATES  
 11155 RED RUN BLVD,  
 OWINGS MILLS, MD. 21117

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PROJECT  
 Howard County Public School System  
 Applications and Research Laboratory (ARL)  
 Automotive Lab Renovation  
 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

DRAWING TITLE  
 PARTIAL PLAN AND SECTIONS

SEAL	DRAWN	PROJECT #	23001.00
	CHECKED	DRAWING #	<b>S1.01</b>
	REVIEWED		
	DATE	04/21/2023	
	SCALE		

CEI 25-012

HCPSS - ARL Auto Shop Renovation

**GENERAL NOTES:**

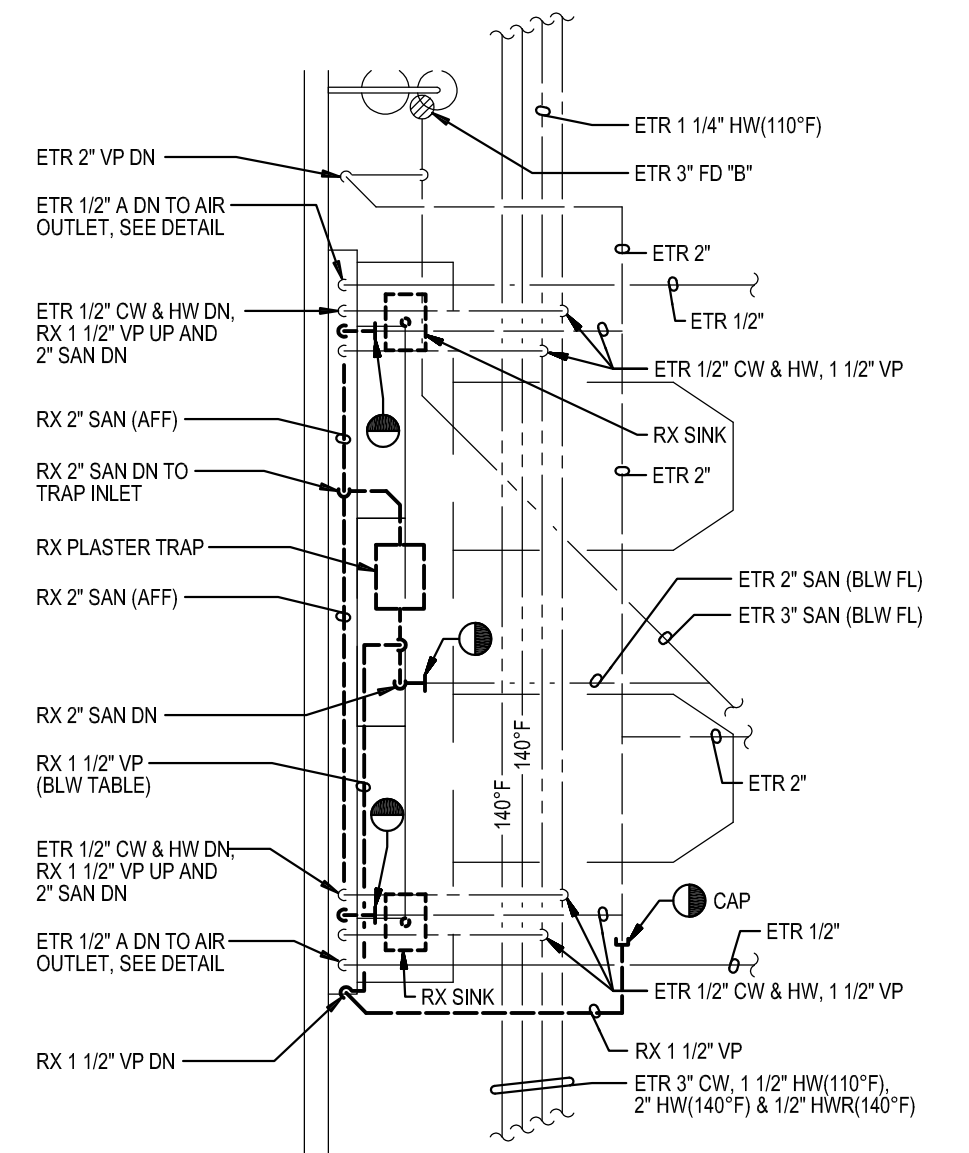
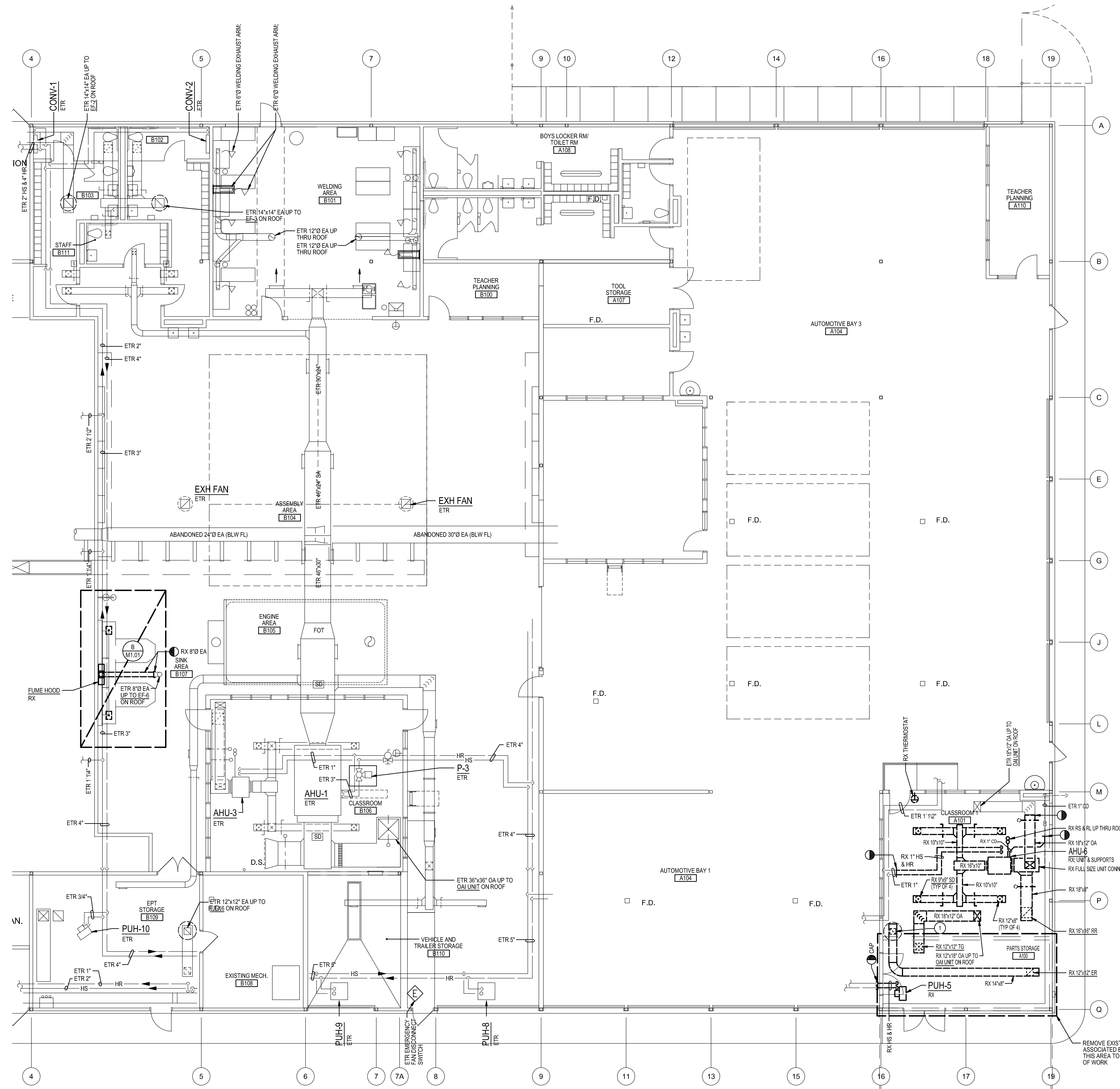
A. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE EXISTING CONDITIONS IN DETAIL OR DIMENSION. DETERMINE EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.

B. DEMOLITION SHALL INCLUDE REMOVAL AND OFF-SITE DISPOSAL OF MATERIALS. DO NOT ABANDON IN PLACE ANY MECHANICAL AND RELATED ELECTRICAL COMPONENTS UNLESS OTHERWISE NOTED ON DRAWINGS.

C. UNLESS OTHERWISE NOTED, MECHANICAL/PLUMBING ITEMS SHOWN HEAVY DASHED ——— SHALL BE REMOVED AND MECHANICAL/PLUMBING ITEMS SHOWN LIGHT SOLID (——) SHALL REMAIN.

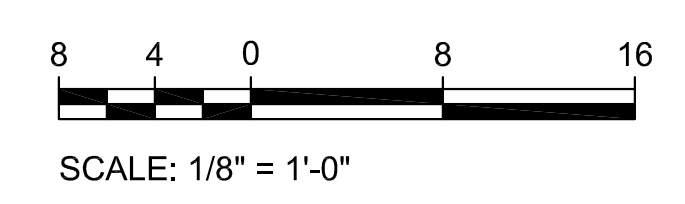
**SPECIFIC NOTES:**

① RX 14"x8" EA UP THRU ROOF TO EE



**B**  
M1.01 PART PLAN - SINK AREA  
PLUMBING - DEMOLITION  
ALTERNATE NO. 2  
SCALE: 1/4"=1'-0"

**A**  
M1.01 PART FIRST FLOOR PLAN  
MECHANICAL - DEMOLITION  
SCALE: 1/8"=1'-0"



NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023

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COLUMBIA, MD. 21045

**James Posey Associates**  
Mechanical & Electrical Consulting Engineers  
11555 Red Run Boulevard, Suite 310  
Baltimore, Maryland 21117  
tel. 410-265-6900  
jamesposey.com

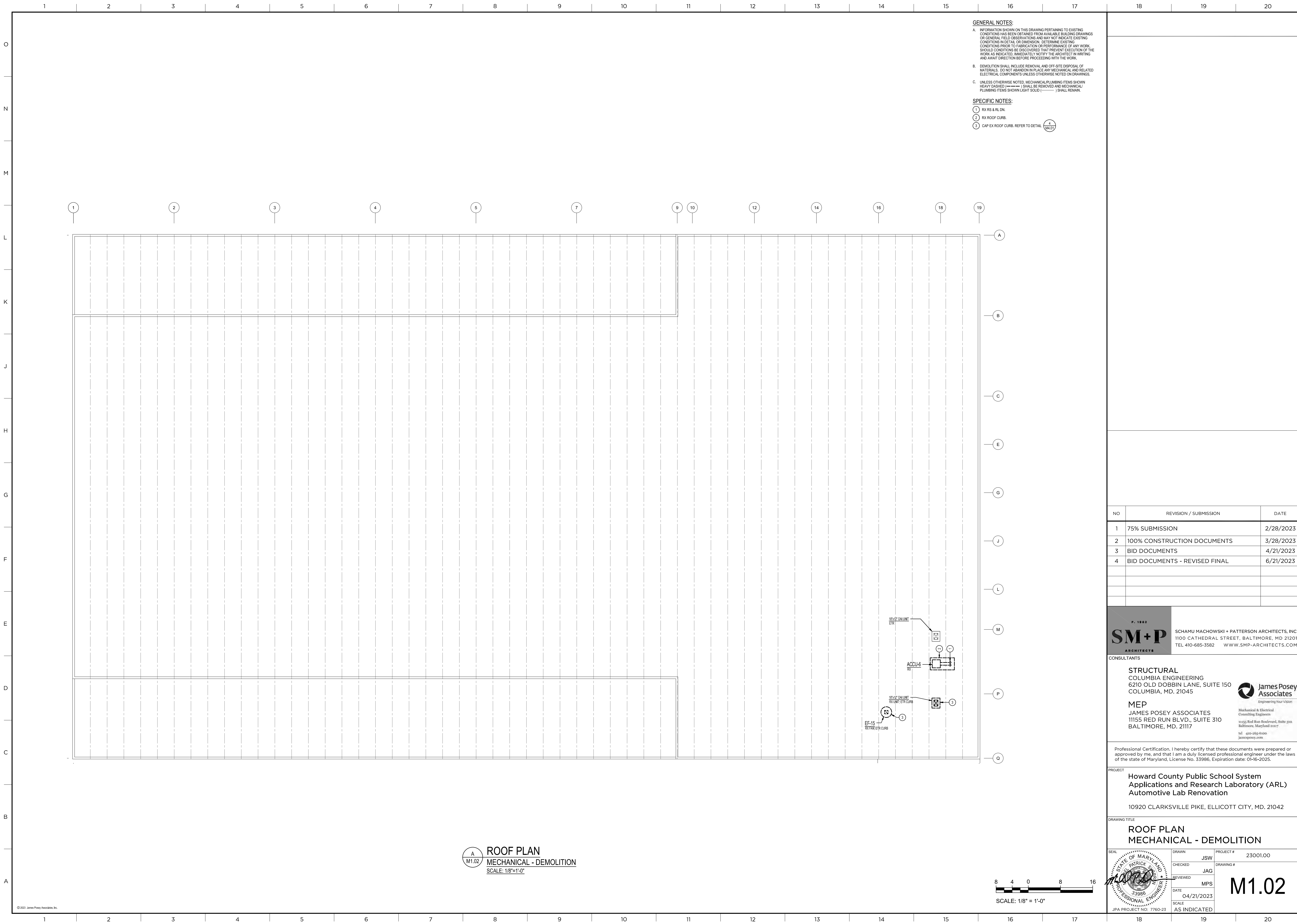
**MEP**  
JAMES POSEY ASSOCIATES  
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BALTIMORE, MD. 21117

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**PROJECT**  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

**DRAWING TITLE**  
PART FIRST FLOOR PLAN  
MECHANICAL - DEMOLITION

	DRAWN: JSW CHECKED: JAG REVIEWED: MPS	PROJECT #: 23001.00 DRAWING #:
	DATE: 04/21/2023 SCALE: AS INDICATED	<b>M1.01</b>
	JPA PROJECT NO: 7760-23	
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	HCPSS - ARL Auto Shop Renovation	



**GENERAL NOTES:**

A. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE EXISTING CONDITIONS IN DETAIL OR DIMENSION. DETERMINE EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.

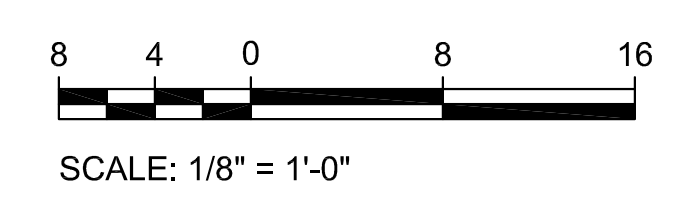
B. DEMOLITION SHALL INCLUDE REMOVAL AND OFF-SITE DISPOSAL OF MATERIALS. DO NOT ABANDON IN PLACE ANY MECHANICAL AND RELATED ELECTRICAL COMPONENTS UNLESS OTHERWISE NOTED ON DRAWINGS.

C. UNLESS OTHERWISE NOTED, MECHANICAL/PLUMBING ITEMS SHOWN HEAVY DASHED (---) SHALL BE REMOVED AND MECHANICAL/PLUMBING ITEMS SHOWN LIGHT SOLID (—) SHALL REMAIN.

**SPECIFIC NOTES:**

1 RX RS & RL DN.  
 2 RX ROOF CURB.  
 3 CAP EX ROOF CURB. REFER TO DETAIL (M1.01)

**ROOF PLAN**  
 MECHANICAL - DEMOLITION  
 SCALE: 1/8" = 1'-0"



NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023

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**STRUCTURAL**  
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 6210 OLD DOBBIN LANE, SUITE 150  
 COLUMBIA, MD, 21045

**MEP**  
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 11155 RED RUN BLVD., SUITE 310  
 BALTIMORE, MD, 21117

**James Posey Associates**  
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 11155 Red Run Boulevard, Suite 310  
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 tel. 410-265-6100  
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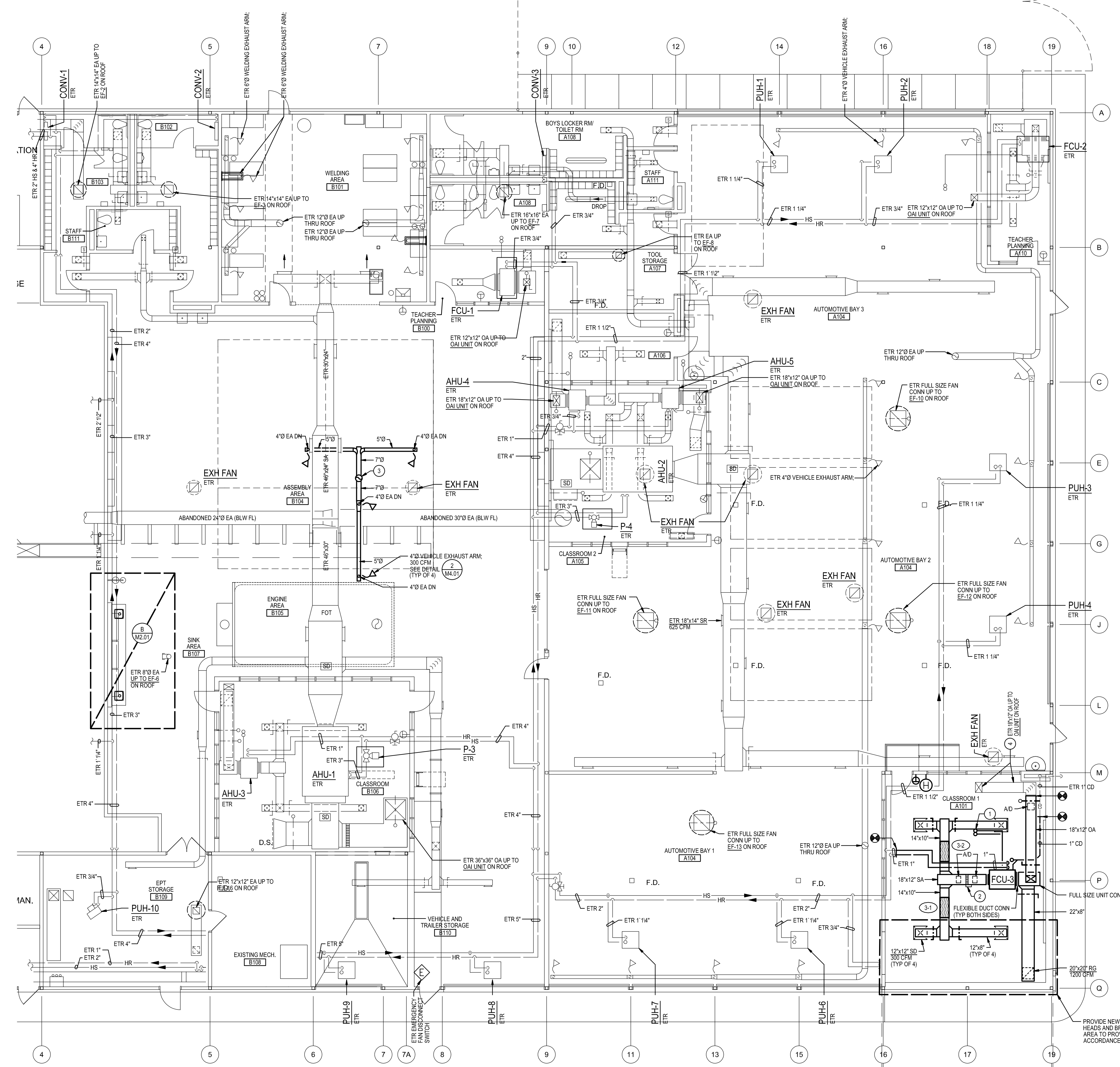
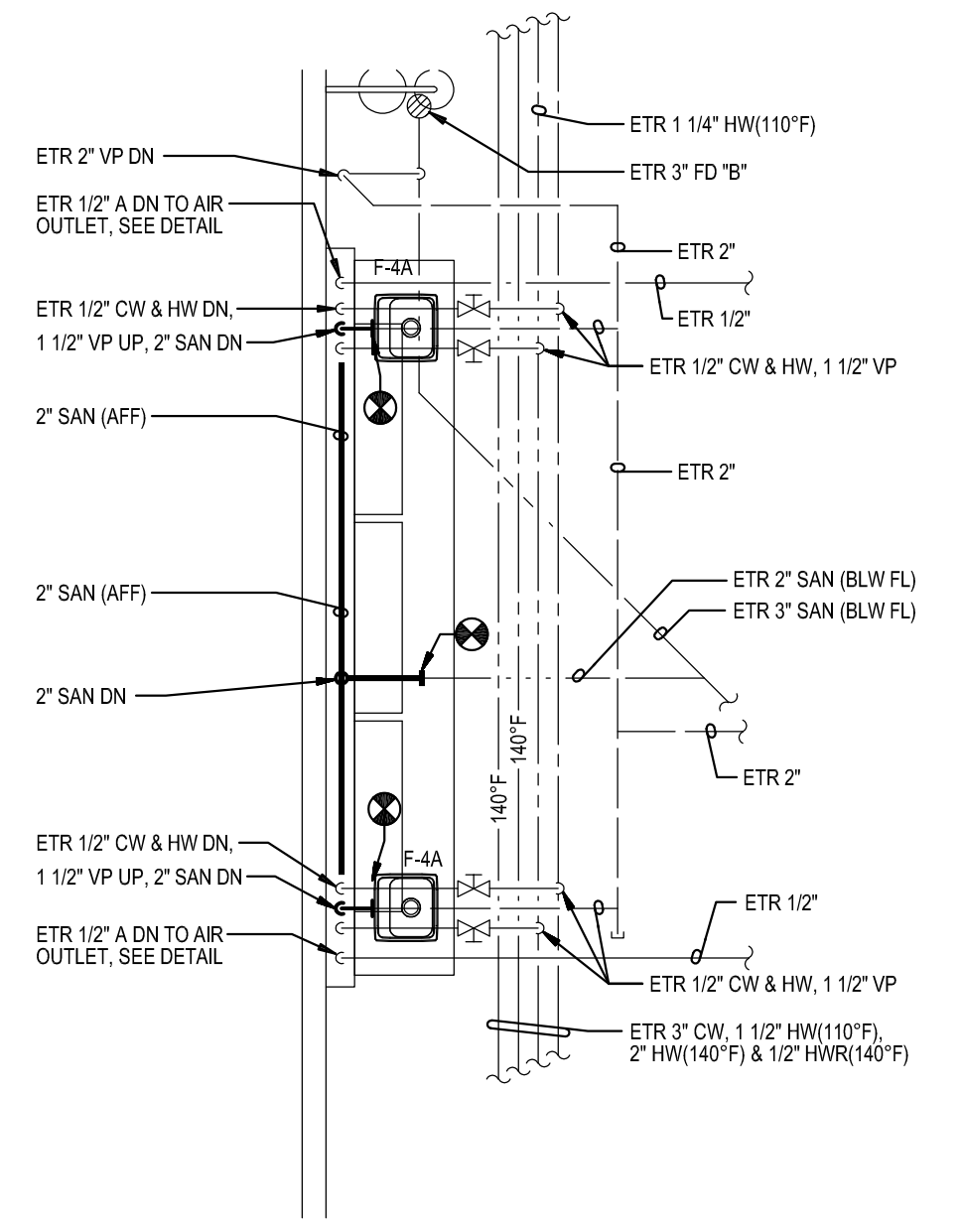
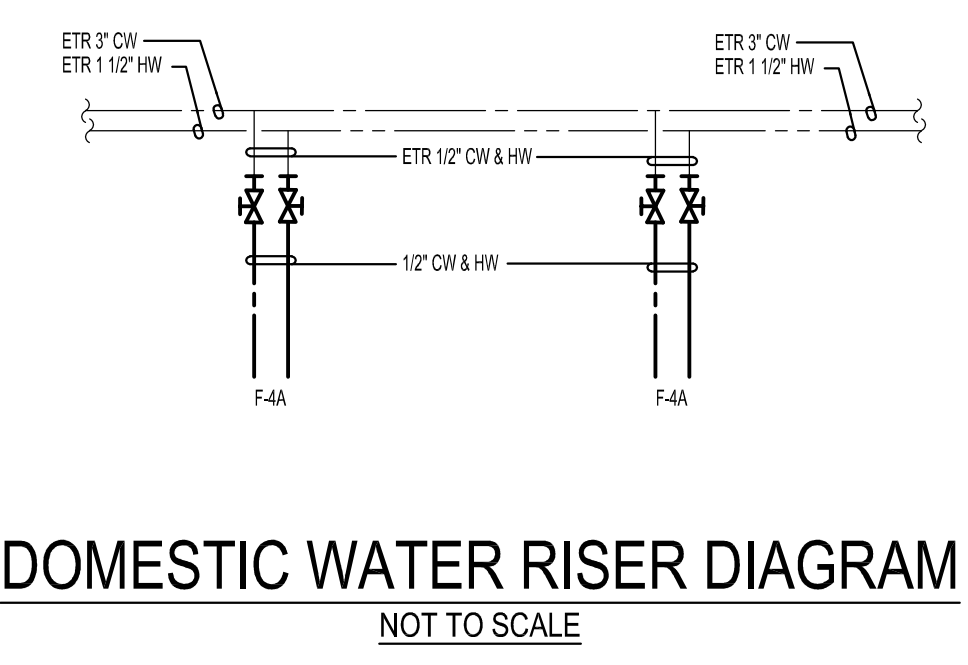
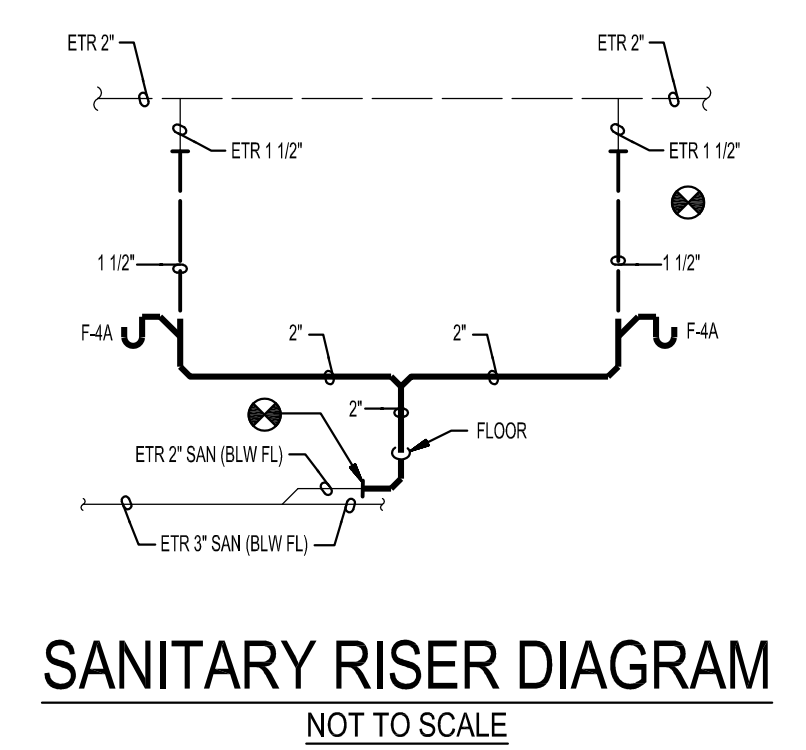
**PROJECT**  
 Howard County Public School System  
 Applications and Research Laboratory (ARL)  
 Automotive Lab Renovation  
 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

**DRAWING TITLE**  
 ROOF PLAN  
 MECHANICAL - DEMOLITION

SEAL OF MARYLAND PROFESSIONAL ENGINEER  
 J. SCHAMU MACHOWSKI  
 33986  
 JPA PROJECT NO: 7760-23

DRAWN: JSW  
 CHECKED: JAG  
 REVIEWED: MPS  
 DATE: 04/21/2023  
 SCALE: AS INDICATED

PROJECT # 23001.00  
 DRAWING #  
**M1.02**



- GENERAL NOTES:**
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  - DO NOT LOCATE DUCTWORK OR PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT.
- SPECIFIC NOTES:**
- RS & RL UP TO ACCUE ON ROOF. PIPING SIZE AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS.
  - ELECTRIC DUCT HEATING COIL, EQUAL TO INDECO ZUB, 18"X12", 55 DEG F. EAT, 75 DEG F. L.A.T., 10 W, 200V-1PH. PROVIDE COMPLETE WITH SCR TYPE DUCT HEATING COIL CONTROLS.
  - 10"Ø SIS EA UP THRU ROOF TO EE-16.
  - CLEAN, RESEAL, AND REINSULATE ETR 18"X12" OA.
  - RS & RL, SIZE, NUMBER, AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS.

NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
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**STRUCTURAL CONSULTANTS**  
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6210 OLD DOBBIN LANE, SUITE 150  
COLUMBIA, MD, 21045

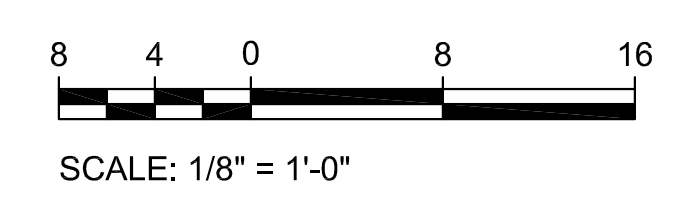
**MEP CONSULTANTS**  
JAMES POSEY ASSOCIATES  
1155 RED RUN BLVD., SUITE 310  
BALTIMORE, MD, 21117

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 33986, Expiration date: 01-16-2025.

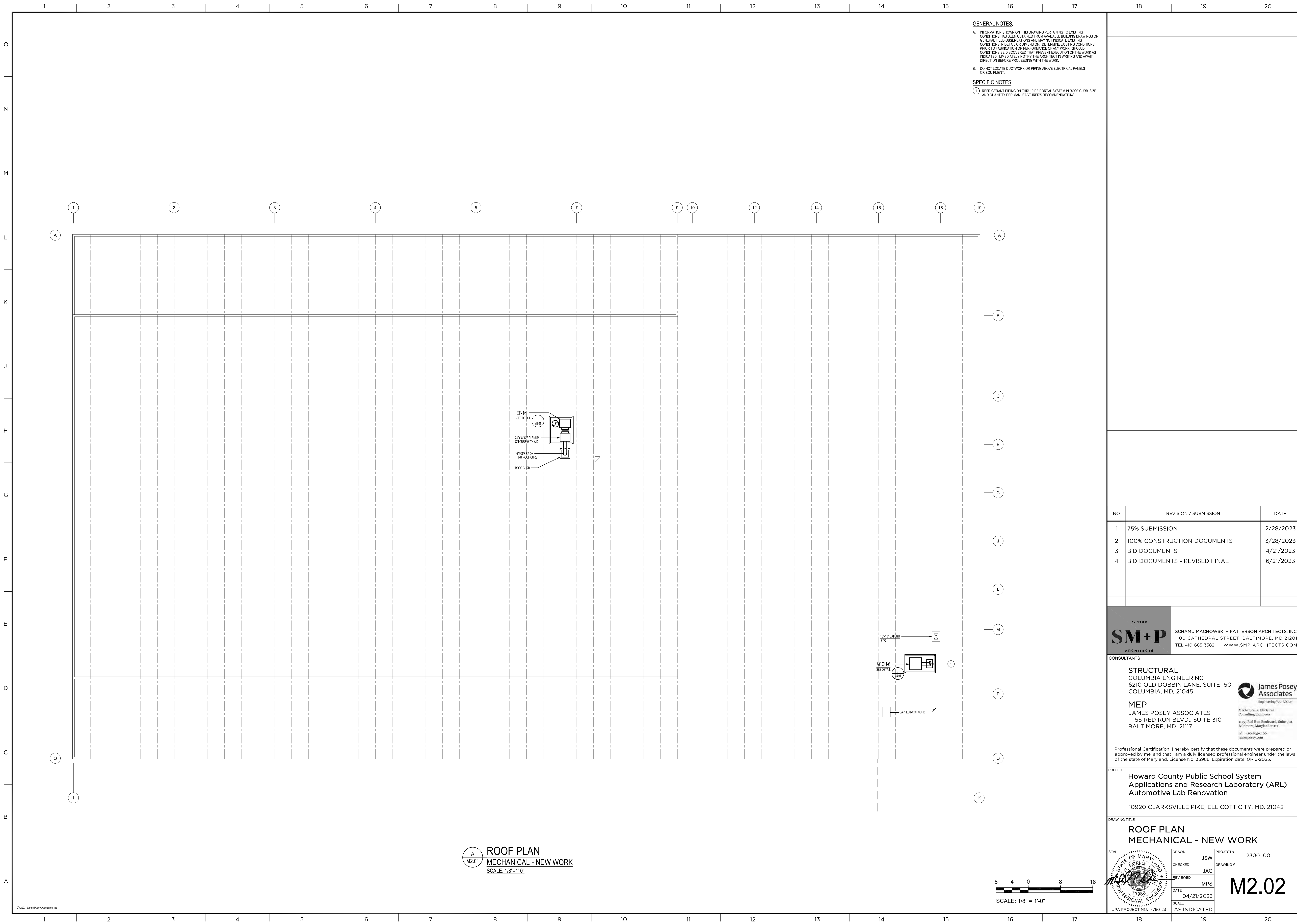
**PROJECT**  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

**DRAWING TITLE**  
PART FIRST FLOOR PLAN  
MECHANICAL - NEW WORK

SEAL OF STATE OF MARYLAND JAMES POSEY 33986 PROFESSIONAL ENGINEER JPA PROJECT NO: 7760-23	DRAWN: JSW CHECKED: JAG REVIEWED: MPS DATE: 04/21/2023 SCALE: AS INDICATED	PROJECT # 23001.00 DRAWING # M2.01
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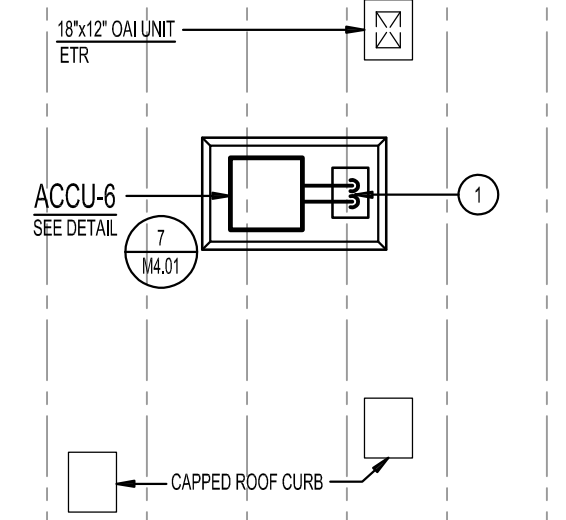
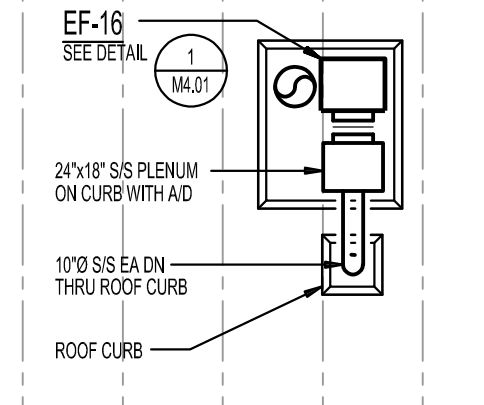
**GENERAL NOTES:**

A. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE EXISTING CONDITIONS IN DETAIL OR DIMENSION. DETERMINE EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.

B. DO NOT LOCATE DUCTWORK OR PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT.

**SPECIFIC NOTES:**

① REFRIGERANT PIPING ON THRU PIPE PORTAL SYSTEM IN ROOF CURB. SIZE AND QUANTITY PER MANUFACTURER'S RECOMMENDATIONS.



NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023

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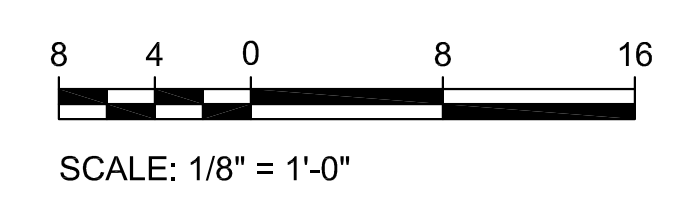
**PROJECT**  
 Howard County Public School System  
 Applications and Research Laboratory (ARL)  
 Automotive Lab Renovation  
 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

**DRAWING TITLE**  
 ROOF PLAN  
 MECHANICAL - NEW WORK

SEAL OF MARYLAND PROFESSIONAL ENGINEER  
 JAMES POSEY  
 33986  
 JPA PROJECT NO: 7760-23

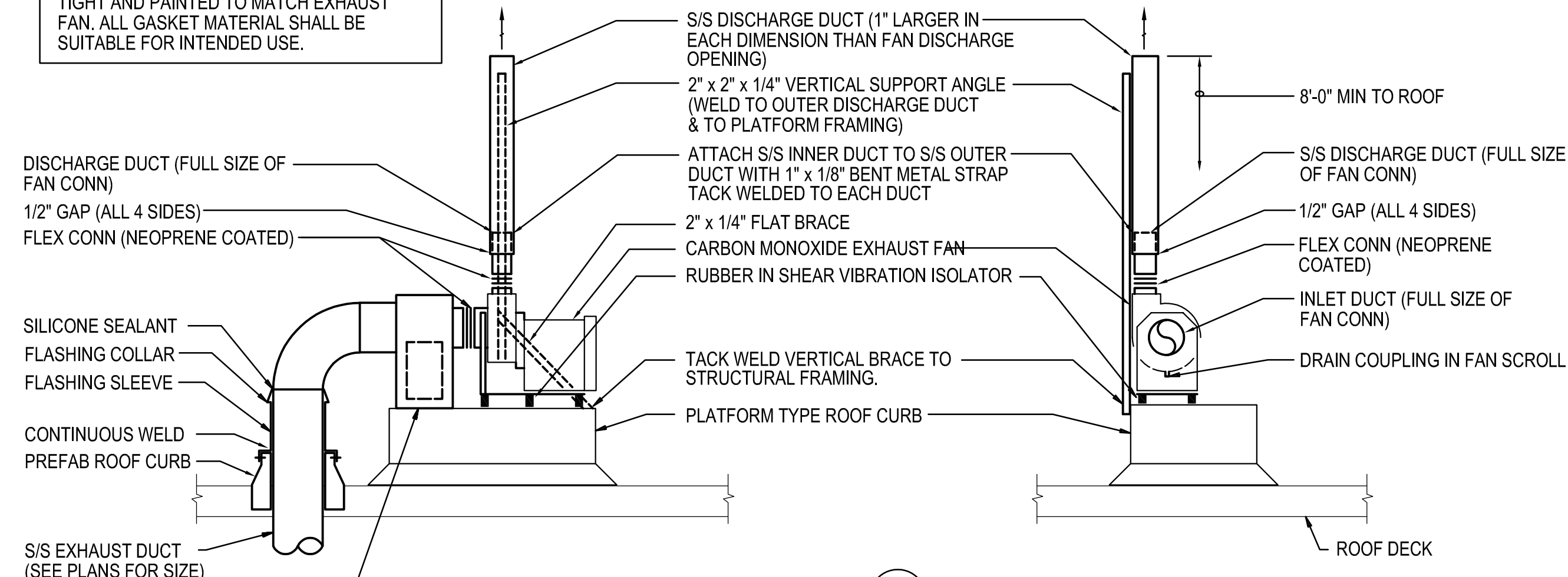
DRAWN: JSW  
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PROJECT # 23001.00  
 DRAWING #  
**M2.02**

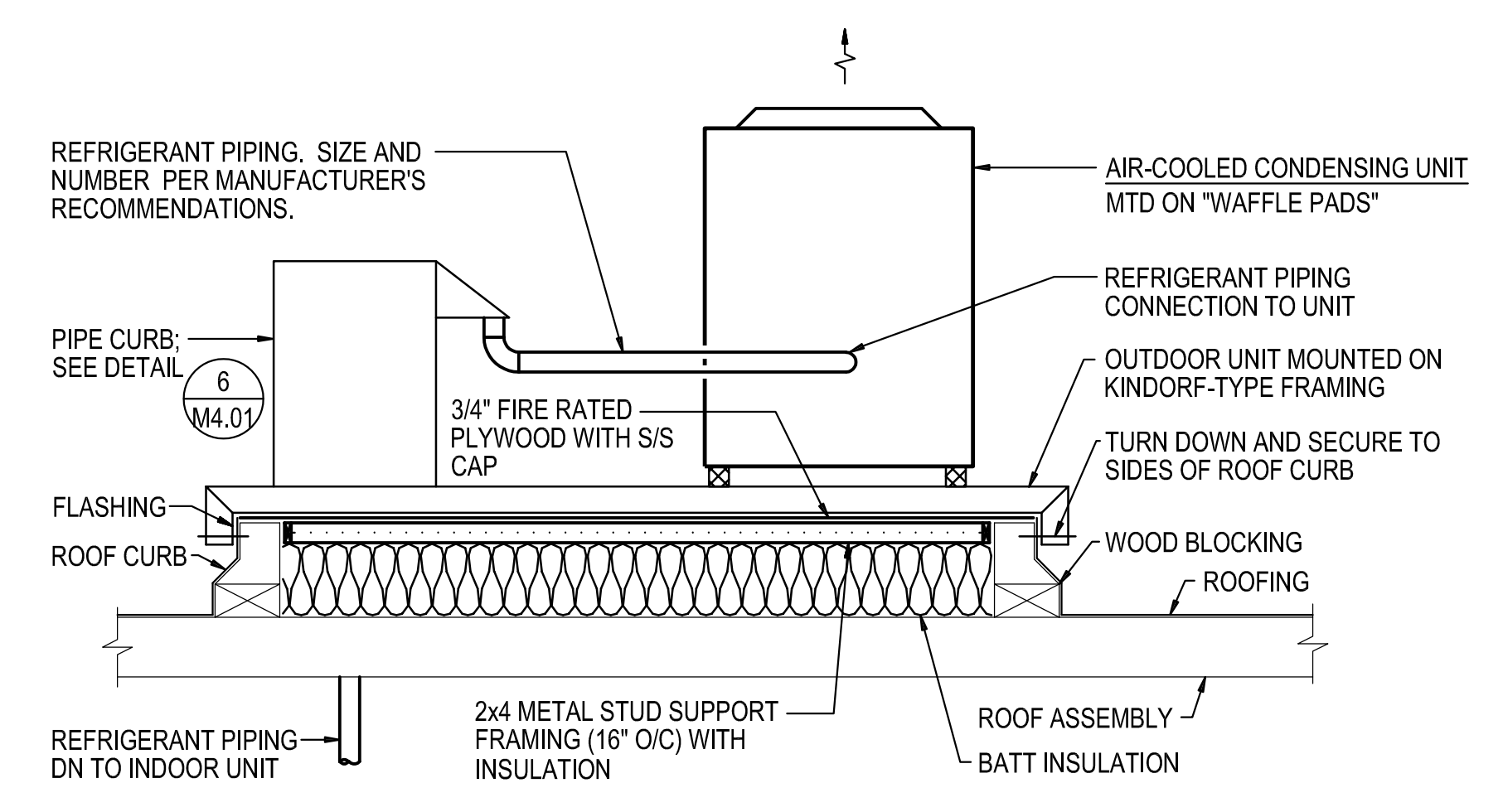


**NOTE:**  
ALL ANGLES, PIPE LEGS, BRACES, PLATES, ETC SHALL BE GALVANIZED STEEL

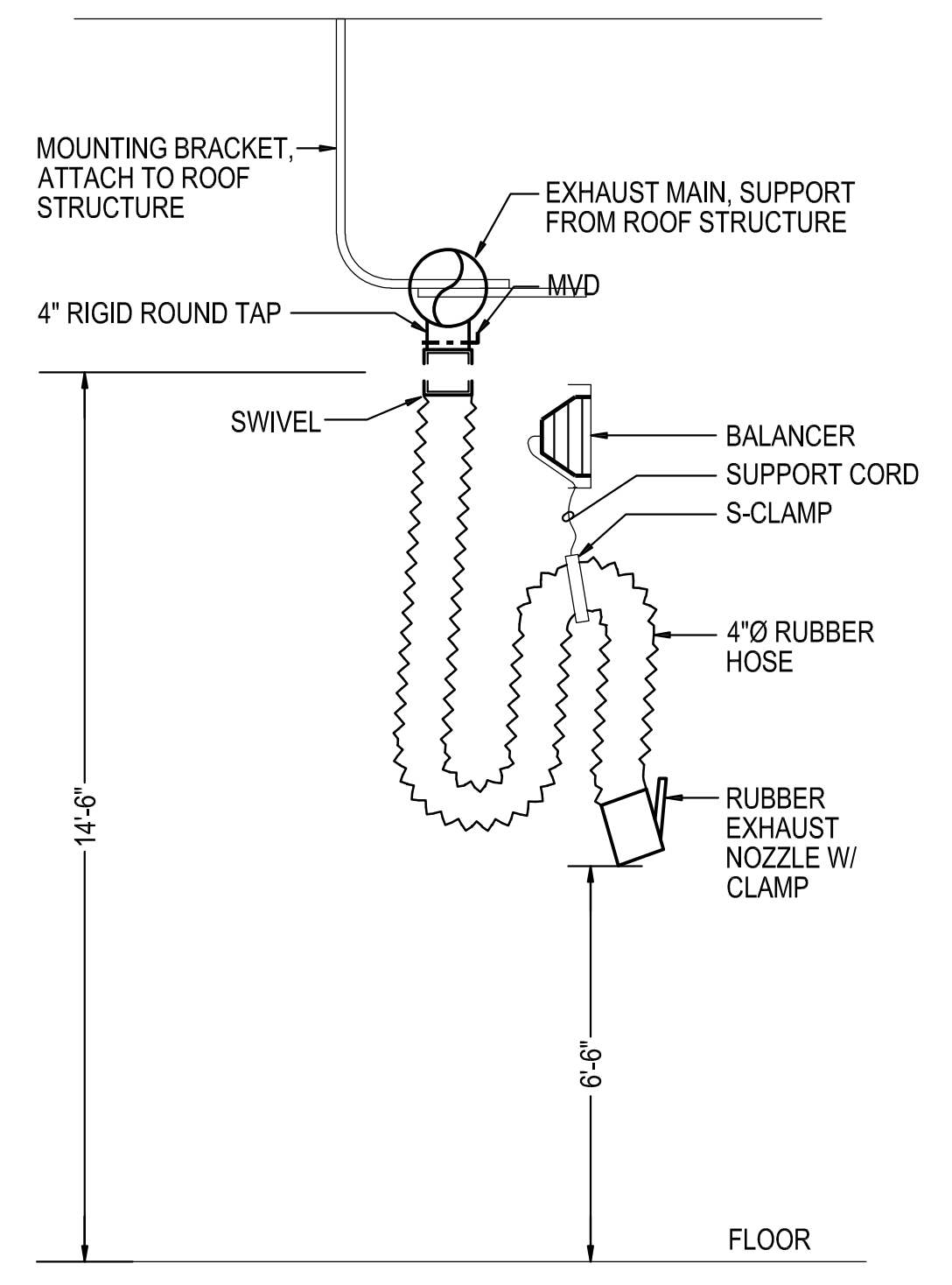
**NOTE:**  
ALL EXTERIOR DUCTWORK SHALL BE FLANGED, GASKETED AND SEALED AIR TIGHT AND PAINTED TO MATCH EXHAUST FAN. ALL GASKET MATERIAL SHALL BE SUITABLE FOR INTENDED USE.



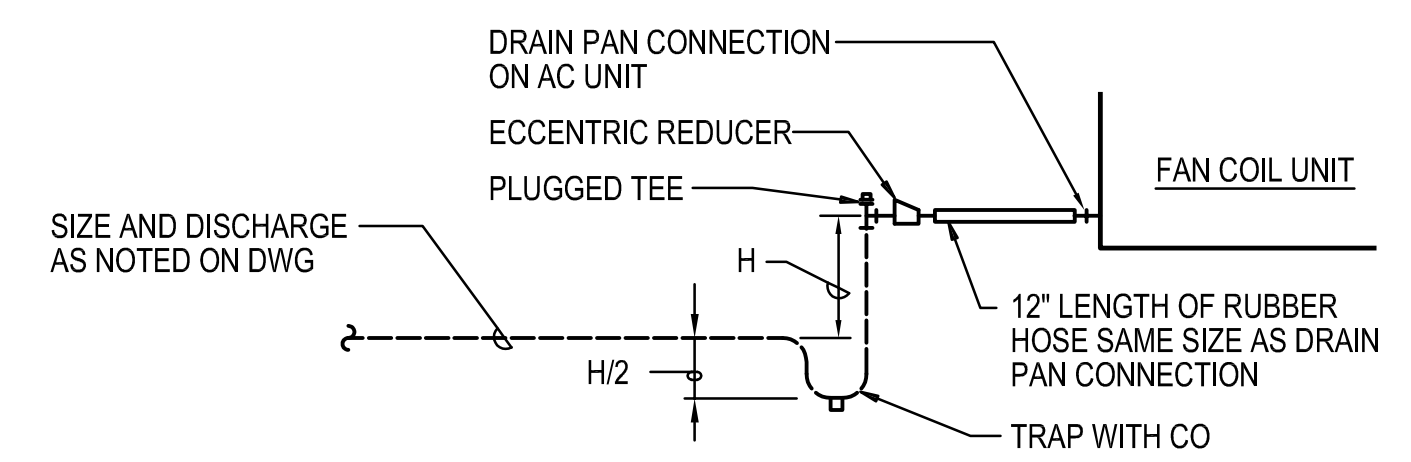
**DETAIL 1**  
INSTALLATION OF TYPICAL ROOF MOUNTED VEHICLE EXHAUST FAN  
NOT TO SCALE



**DETAIL 7**  
AIR-COOLED CONDENSING UNIT INSTALLATION  
NOT TO SCALE

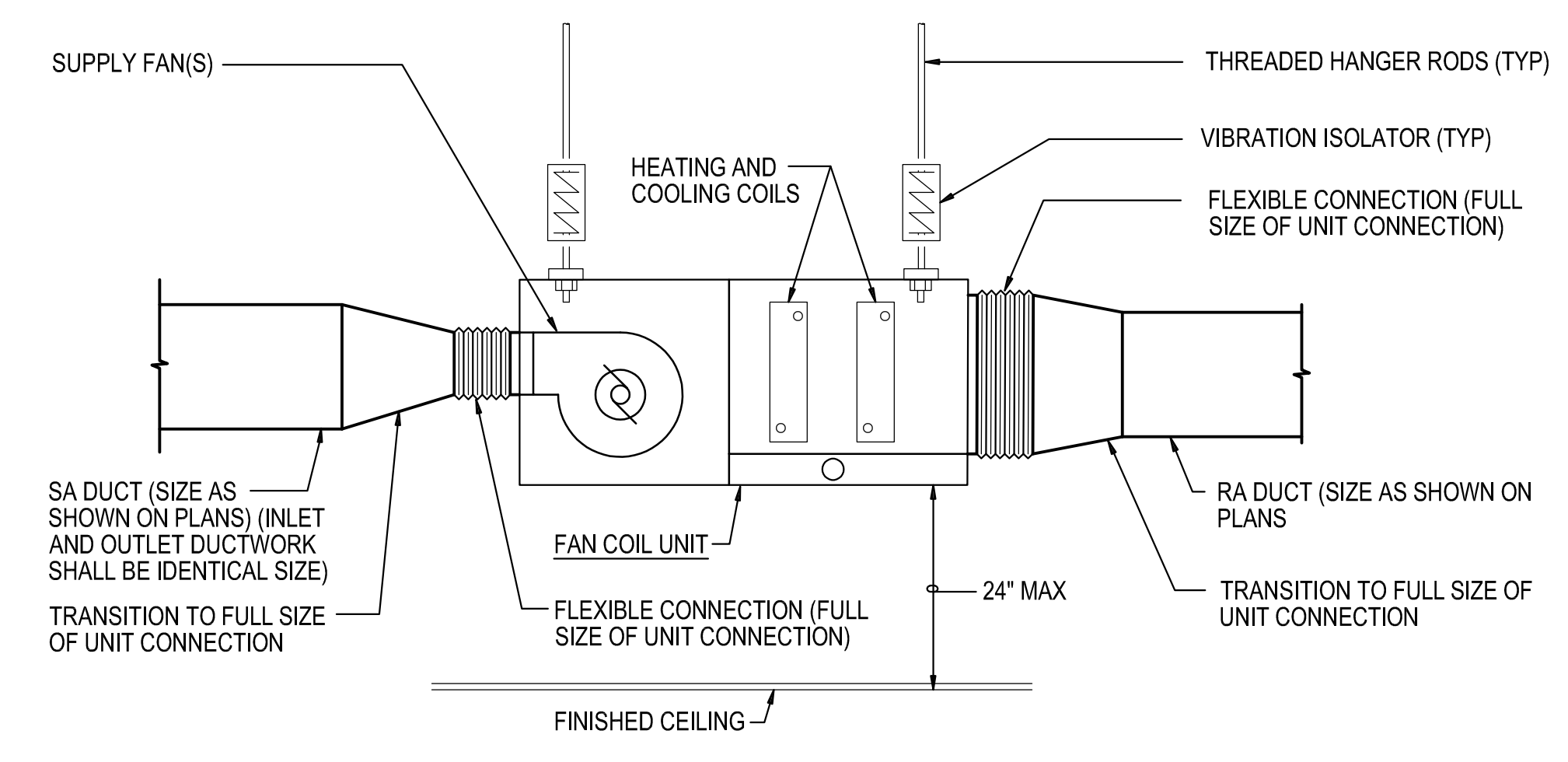


**DETAIL 2**  
AUTOMOTIVE VEHICLE EXHAUST ARM  
NOT TO SCALE

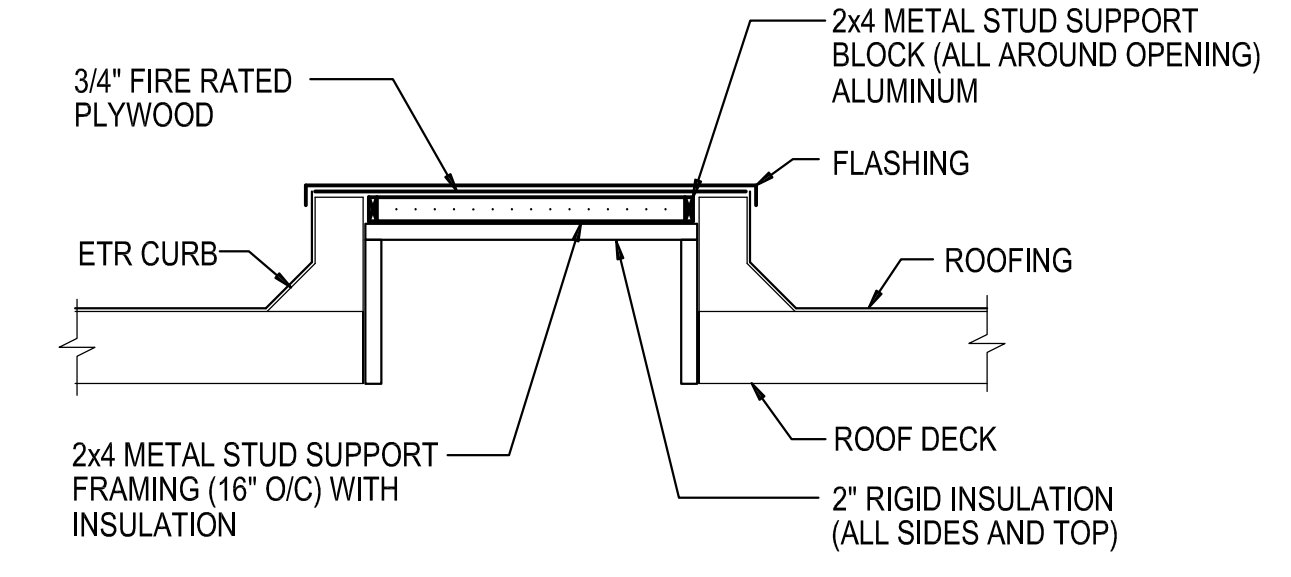


**NOTES:**  
H=TOTAL SP OF UNIT FAN + 1/2" (SEE UNIT SCHEDULE)  
WHEN COIL SECTION OF AC UNIT IS ISOLATED FROM FAN SECTION WITH FLEXIBLE CONNECTION, THE 12" LENGTH OF RUBBER HOSE SHOWN ON THIS DETAIL MAY BE ELIMINATED.

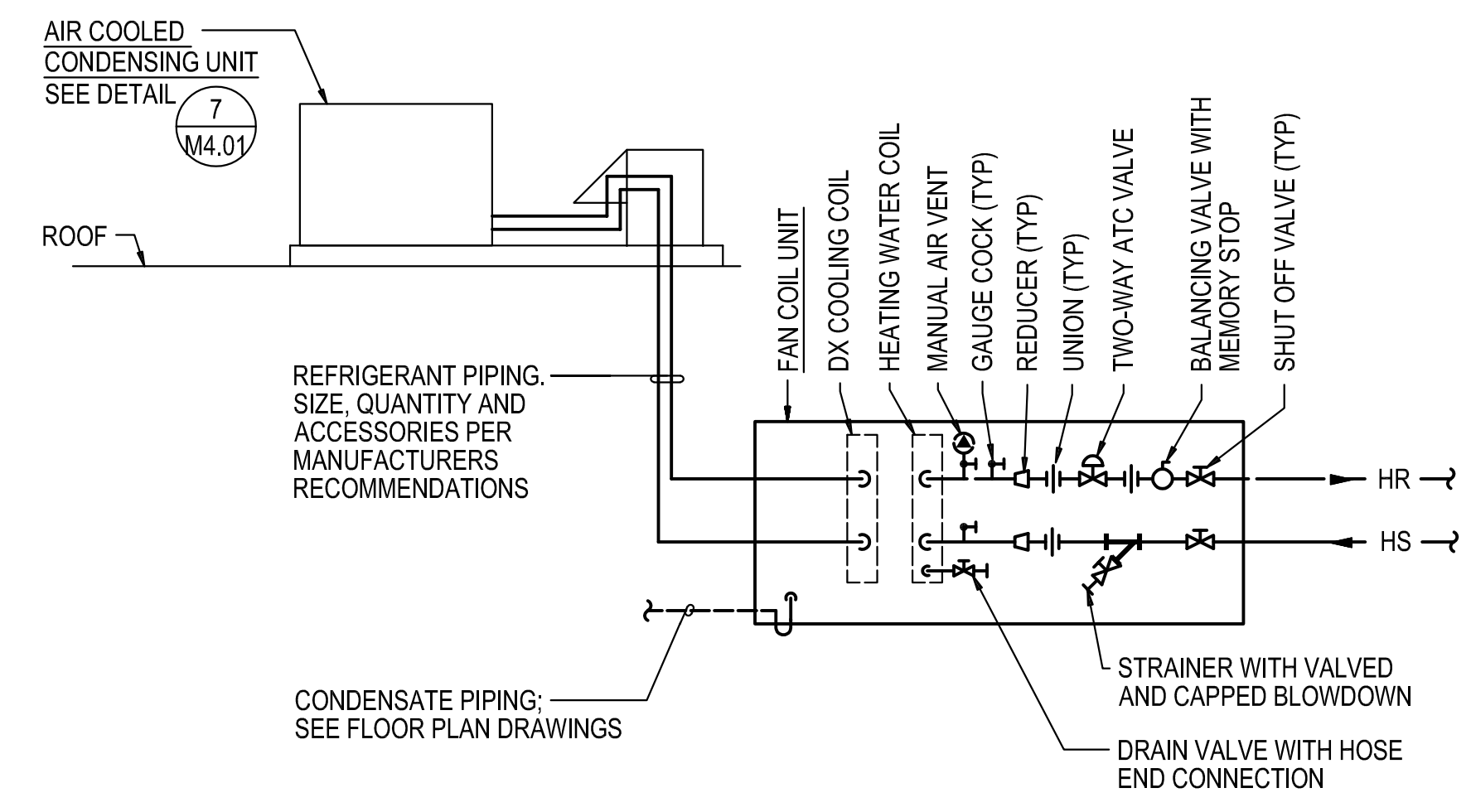
**DETAIL 4**  
TYPICAL CONDENSATE PIPE CONNECTION TO DRAW THRU FAN COIL UNIT  
NOT TO SCALE



**DETAIL 8**  
TYPICAL INSTALLATION OF HORIZONTAL FAN COIL UNIT  
NOT TO SCALE

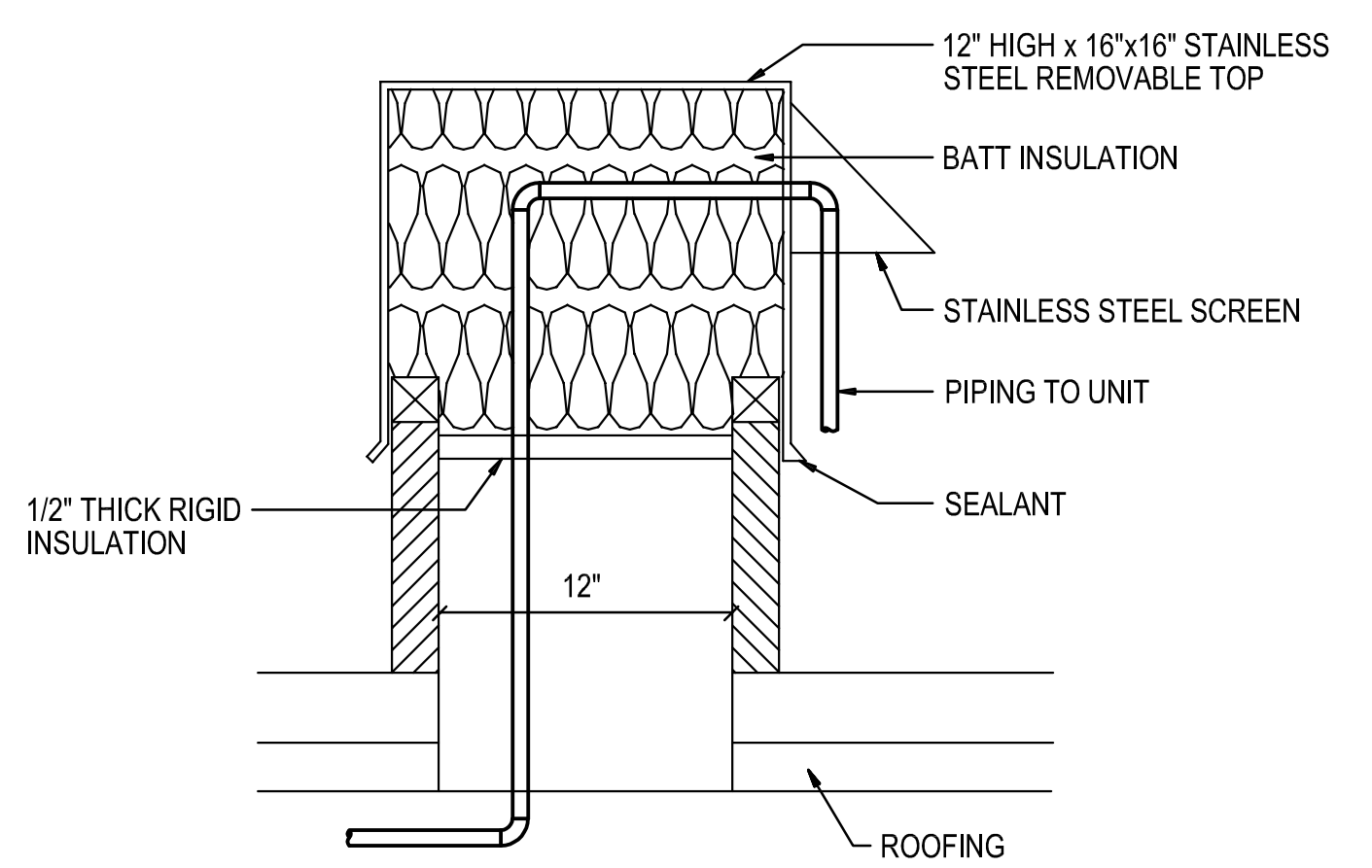


**DETAIL 5**  
TYPICAL ROOF CURB CAP  
NOT TO SCALE



**GENERAL NOTES:**  
COORDINATE ROUTING OF ALL PIPING, VALVES, AND FITTINGS FOR MAINTAINING MAINTENANCE ACCESS TO FAN COIL UNIT COMPONENTS (SUCH AS THE UNIT SUPPLY FAN)  
PIPE COIL TO PRODUCE WATER/AIR COUNTERFLOW. SEE MANUFACTURER'S PIPING RECOMMENDATIONS.

**DIAGRAM 3**  
TYPICAL PIPING CONNECTIONS TO HEATING WATER / DX COOLING FAN COIL UNITS  
NOT TO SCALE



**DETAIL 6**  
PIPE PENETRATION THROUGH ROOF  
NOT TO SCALE

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**DRAWING TITLE**  
DETAILS AND DIAGRAMS

**SEAL**  
STATE OF MARYLAND  
JAMES POSEY  
33986  
PROFESSIONAL ENGINEER  
JPA PROJECT NO: 7760-23

**DRAWN** JSW  
**CHECKED** JAG  
**REVIEWED** MPS  
**DATE** 04/21/2023  
**SCALE** AS INDICATED

**PROJECT #** 23001.00  
**DRAWING #**  
**M4.01**





**MECHANICAL SPECIFICATIONS**

**01 1100 - GENERAL REQUIREMENTS**

- A. THE WORK INCLUDES FURNISHING OF LABOR, EQUIPMENT, AND MATERIALS, AND THE PERFORMANCE OF OPERATIONS PERTINENT TO THE WORK DESCRIBED.
- B. OBTAIN AND PAY FOR PERMITS, FEES AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- C. MATERIALS AND EQUIPMENT SHALL BE NEW.
- D. THE WORK AND EQUIPMENT PROVIDED SHALL BE FULLY WARRANTED UNDER THE GENERAL PROJECT WARRANTY. DURING THE CORRECTION PERIOD, CORRECT ANY WORK FOUND TO BE NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, BY PROMPTLY REPAIRING OR COMPLETELY REPLACING WORK REQUIRING CORRECTION AT NO ADDITION TO THE CONTRACT SUM. EXCEPT AS OTHERWISE REQUIRED IN GENERAL CONDITIONS, THE CORRECTION PERIOD IS TWO YEARS AFTER THE DATE OF SUBSTANTIAL COMPLETION.
- E. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS, OR MODEL NAME OR CATALOG REFERENCE NUMBER, ESTABLISH A STANDARD OF QUALITY, OPTIONS TO BE INCLUDED, AND PERFORMANCE.
  - 1. WHERE OTHER ACCEPTABLE MANUFACTURERS ARE NAMED, CONTRACTOR MAY PROVIDE PRODUCTS OF THOSE NAMED MANUFACTURERS ONLY, WHICH MEET THE SPECIFICATIONS.
  - 2. WHERE SPECIFICATION PERMITS "EQUAL" PRODUCTS, WITHOUT NAMING OTHER ACCEPTABLE MANUFACTURERS, CONTRACTOR MAY USE PRODUCTS OF ANY MANUFACTURER, WHICH MEET THE SPECIFICATIONS.
- F. TEMPORARY STORAGE: MAINTAIN UPON PREMISES, WHERE DIRECTED, A STORAGE AREA, AND BE RESPONSIBLE FOR CONTENTS WITHIN THIS AREA.
- G. PROTECTION: CONTROL DUST RESULTING FROM CONSTRUCTION WORK TO PREVENT ITS SPREAD BEYOND THE IMMEDIATE WORK AREA, AND TO AVOID CREATION OF A NUISANCE. PREVENT DAMAGE AND SOILING OF WORK. REPAIR DAMAGE OR SOILING OR REPLACE MATERIALS OR WORK DAMAGED, AT NO ADDITION TO THE CONTRACT SUM.
- H. PROMPTLY NOTIFY THE ARCHITECT IF MATERIALS SUSPECTED OF CONTAINING SOME HAZARD ARE ENCOUNTERED. DO NOT PERFORM ANY WORK THAT COULD DISTURB THE SUSPECTED MATERIAL UNTIL WRITTEN INSTRUCTIONS HAVE BEEN RECEIVED.
- I. EQUIPMENT, CONSTRUCTION AND INSTALLATION SHALL MEET REQUIREMENTS OF LOCAL, STATE AND FEDERAL GOVERNING CODES.
- J. SUBMIT SHOP DRAWINGS AND/OR PRODUCT DATA FOR EACH ITEM OF EQUIPMENT OR MATERIAL TO BE USED.
- K. SUBMIT REQUIRED CERTIFICATES OF APPROVAL FROM APPROVED INSPECTION AGENCIES AND AUTHORITIES HAVING JURISDICTION. CERTIFICATES OF APPROVAL SHALL BE RECEIVED BY THE ARCHITECT PRIOR TO FINAL ACCEPTANCE OF THE WORK.
- L. SUBMIT PROJECT RECORD DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - 1. ONE SET OF CONTRACT DOCUMENTS NEATLY MARKED IN RED INK TO RECORD ACTUAL REVISIONS TO THE WORK AS CONSTRUCTED.
  - 2. LUBRICATION CHARTS AND OPERATING INSTRUCTIONS MOUNTED IN PLASTIC COVERS FOR POSTING.
  - 3. OPERATION AND MAINTENANCE DATA, INCLUDING:
    - a. SIGNIFICANT DESIGN CRITERIA SUCH AS FAN CURVES.
    - b. LIST OF EQUIPMENT, INCLUDING WEIGHTS.
    - c. PARTS LISTS AND RECOMMENDED SPARE PARTS LISTS.
    - d. OPERATING INSTRUCTIONS.
    - e. MAINTENANCE INSTRUCTIONS.
    - f. VALVE CHARTS, INCLUDING LOCATIONS OF FLOW FITTINGS.
    - g. SHOP DRAWINGS AND PRODUCT DATA.
    - h. AIR AND WATER BALANCE REPORTS.
    - i. CERTIFICATES, WARRANTIES, AND GUARANTEES.
    - j. TEST REPORTS.
- M. WELDING, BRAZING, AND SOLDERING PROCEDURES AND OPERATOR QUALIFICATIONS FOR BUILDING SYSTEMS PIPING SHALL COMPLY WITH AWS D10.9, ASME B31.9 BUILDING SERVICES PIPING, COPPER DEVELOPMENT ASSOCIATION "COPPER TUBE HANDBOOK", AND SAFE DRINKING WATER ACT.

**02 5000 - TRENCHING, BACKFILLING, AND COMPACTING**

- A. INCLUDE EXCAVATING, TRENCHING, SHEETING, SHORING, BACKFILLING, AND COMPACTING REQUIRED FOR THE PROPER INSTALLATION OF WORK.
- B. PROTECT EXISTING UTILITIES FROM DAMAGE DURING THE EXCAVATION AND BACKFILLING. REPAIR NEW AND EXISTING WORK, IF DAMAGED, AT NO ADDITION TO THE CONTRACT SUM.
- C. PROVIDE TEMPORARY WALKWAYS OVER TRENCHES WITH RAILINGS AND OTHER SAFEGUARDS, INCLUDING AMBER BLINKER LAMPS OR OTHER WARNINGS FOR NIGHT USE.
- D. FURNISH AND MAINTAIN PUMPS, FLUMES, GUTTERS, AND APPURTENANCES TO KEEP THE EXCAVATIONS FREE FROM WATER DURING THE WORK. WATER SHALL BE DIRECTED TO A POINT REMOTE FROM BUILDING OPERATIONS, APPROVED BY THE ARCHITECT.
- E. BACKFILL IN SIX-INCH LAYERS, EACH COMPACTED TO 90 PERCENT DENSITY.

**03 0000 - CUTTING AND PATCHING**

- A. CUT WALLS, FLOORS, PARTITIONS, ROOFS, AND OTHER APPURTENANCES FOR THE PASSAGE OR ACCOMMODATION OF CONDUITS. CLOSE SUPERFLUOUS OPENINGS AND REMOVE DEBRIS CAUSED BY WORK OF THIS DIVISION.
- B. NO CUTTING OF ANY STRUCTURE OR FINISH SHALL BE DONE UNTIL THE CONDITION REQUIRING SUCH CUTTING HAS BEEN EXAMINED AND APPROVED BY THE ARCHITECT.
- C. NEW OR EXISTING SURFACES DISTURBED AS A RESULT OF SUCH CUTTING OR OTHERWISE DAMAGED SHALL BE RESTORED TO MATCH ORIGINAL WORK AND MATERIALS USED FOR ANY PATCHING OR MENDING SHALL CONFORM TO THE CLASS OF MATERIALS ORIGINALLY INSTALLED.
- D. REFINISH SURFACES TO MATCH ADJACENT FINISH. FOR CONTINUOUS SURFACES, REFINISH TO NEAREST INTERSECTION OR NATURAL BREAK. FOR AN ASSEMBLY, REFINISH ENTIRE UNIT.

**07 8000 - FIRESTOPPING**

- A. SUBMIT DESCRIPTIONS (PRODUCT DATA) OF FIRESTOP OR SMOKESTOP ASSEMBLIES AND DEVICES FOR EVERY TYPE OF OPENING AND THROUGH PENETRATION IN FLOORS AND FIRE- OR SMOKE-RATED PARTITIONS.
- B. ACCEPTABLE MANUFACTURERS AND PRODUCTS: LISTED BY UL OR WARNOCK HERSEY FOR THE SYSTEMS PROPOSED. WHERE UL OR WARNOCK HERSEY LISTING IS NOT AVAILABLE, OBTAIN WRITTEN ACCEPTANCE OF ASSEMBLY OR MATERIAL BY AUTHORITIES HAVING JURISDICTION.
- C. PROVIDE SYSTEMS OR DEVICES CONFORMING TO THE CONSTRUCTION TYPE, PENETRANT TYPE, ANNULAR SPACE REQUIREMENTS AND FIRE RATING INVOLVED IN EACH SEPARATE INSTANCE. SYSTEMS SHALL BE SYMMETRICAL FOR WALL APPLICATIONS.
  - 1. PROVIDE FOR EVERY OPENING AND THROUGH PENETRATION IN FLOORS AND FIRE- OR SMOKE-RATED PARTITIONS.
- D. INSTALL IN ACCORDANCE WITH TESTING AND INSPECTION AGENCY'S AND MANUFACTURER'S INSTRUCTIONS.
- E. KEEP AREAS OF WORK ACCESSIBLE UNTIL INSPECTION AND ACCEPTANCE BY AUTHORITIES HAVING JURISDICTION.
- F. BEFORE SUBSTANTIAL COMPLETION, PATCH AND REPAIR FIRESTOPPING CUT OR PENETRATED BY OTHER CONSTRUCTION WORK.

**21 1000 - WET-PIPE FIRE SUPPRESSION SYSTEM**

- A. INSTALL FIRE SUPPRESSION SPRINKLER PIPING AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH NFPA 13.
- B. PIPING: METAL, TYPES AS PERMITTED BY NFPA 13, UL LISTED AND FM APPROVED.
  - 1. PIPE SHALL BE CERTIFIED BY THE MANUFACTURER TO MEET REFERENCED STANDARDS AND SHALL BEAR A LABEL, DIRECTLY ON THE PIPE, INDICATING COMPLIANCE.
- C. FITTINGS: TYPES AS PERMITTED BY NFPA 13, EXCEPT COMPRESSION TYPES ARE NOT PERMITTED. PROVIDE TYPES COMPATIBLE WITH EXISTING SYSTEM.
  - 1. THREADED JOINTS SHALL BE MADE WITH AN APPROVED PIPE JOINT COMPOUND OR TEFLON TAPE.
- D. SPRINKLERS:
  - 1. SUSPENDED CEILINGS: ADJUSTABLE RECESSED PENDENT, UL APPROVED, QUICK RESPONSE, CHROME-PLATED WITH ESCUTCHEON, INSTALL NO CLOSER THAN 6-INCHES FROM SUSPENDED CEILING SUPPORTS.

**22 0000 - PLUMBING, GENERAL**

- A. GENERAL AND DEMOLITION DESCRIPTION: SEE 23 0000, HVAC.
- B. MATERIALS AND METHODS: SEE 23 0500, BASIC MATERIALS AND METHODS.
- C. ACCEPTANCE PRODUCT MARKING: NSF@-61 AND NSF@-372 (OR NSF@-61-G) OR OTHER ACCEPTED CERTIFIER MARKS DEMONSTRATING THIRD PARTY CERTIFICATION WITH THESE REQUIREMENTS.
- D. PIPE SHALL BE CERTIFIED BY THE MANUFACTURER TO MEET REFERENCED STANDARDS AND SHALL BEAR A LABEL, DIRECTLY ON THE PIPE, INDICATING COMPLIANCE.

**22 0800 - PLUMBING INSULATION**

- A. PIPING INSULATION:
  - 1. FIBERGLASS, 4-LB. DENSITY, K VALUE OF 0.23 AT 75 DEGREES F MEAN TEMPERATURE, WITH FACTORY APPLIED FIRE RETARDANT VAPOR BARRIER ALL SERVICE JACKET (ASJ). TAPE JOINTS WITH PRESSURE-SENSITIVE TAPE MATCHING JACKET. INSULATION SHALL BE CONTINUOUS THROUGH HANGERS AND PENETRATIONS FOR COLD PIPING.
  - 2. THICKNESS SHALL BE AS FOLLOWS:
    - a. DOMESTIC WATER PIPING: 1.0 INCH.
    - b. CONDENSATE PIPING: 1.0 INCHES.
    - c. SANITARY SYSTEMS RECEIVING CONDENSATE: 1.0 INCH.

**22 1000 - BUILDING SERVICES: PLUMBING PIPING**

- A. VALVES:
  - 1. WATER SHUTOFF: NPS 2 (DN 50) AND SMALLER: BALL VALVES; 600 PSI CWP, TWO-PIECE SILICON BRONZE ALLOY BODY, FULL PORT, BLOWOUT-PROOF STEM, PTFE SEATS, STAINLESS-STEEL BALL AND STEM. EXTENSION HANDLE FOR USE IN INSULATED PIPING, THREADED OR SOLDERED ENDS, NIBCO T-685-66-LF OR S-685-66-LF.
- B. DOMESTIC WATER PIPING
  - 1. COPPER TUBING ASTM B 88, TYPE L ABOVEGROUND, TYPE K UNDERGROUND.
  - 2. FITTINGS: SOLDER JOINT CAST BRASS ASME B16.18 OR WROUGHT COPPER ANSI B16.22.
- C. SANITARY AND AIR CONDITIONING CONDENSATE PIPING
  - 1. UNDERGROUND OR BELOW SLAB ON EARTH
    - a. GRAVITY TYPE: SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE AND FITTINGS, ASTM A 74 WITH LEAD AND OAKUM JOINTS OR NEOPRENE GASKETED JOINTS.
  - 2. ABOVEGROUND PIPING
    - a. CAST IRON NO-HUB PIPE, CAST IRON SOIL PIPE INSTITUTE STANDARD 301, WITH NEOPRENE GASKETS ASTM C 564 AND 304 STAINLESS STEEL BANDS.
    - b. DWV COPPER TUBING, ASTM B 306 WITH COPPER DRAINAGE FITTINGS, ANSI B16.29.
- D. PIPING TESTS: PRESSURE TEST PIPING SYSTEMS WITH FOLLOWING PRESSURES FOR FOUR HOURS WITH NO LOSS OF PRESSURE:
 

SERVICE	TEST PRESSURE	MEDIUM
DOMESTIC WATER	125 PSI	WATER
SANITARY	4.3 PSI	WATER
CONDENSATE DRAIN	4.3 PSI	WATER

**22 2000 - PLUMBING FIXTURES AND SPECIALTIES**

- A. F-4A - SINK: EQUAL TO ELKAY MODEL LRAD171655 LUSTERTONE CLASSIC STAINLESS STEEL
  - 1. FAUCET: EQUAL TO ELKAY MODEL LKD20859C; SINGLE HOLE DECK MOUNT WITH GOOSENECK SPOUT LEVER HANDLE ON RIGHT SIDE.
  - 2. TAILPIECE: BRASS CRAFT NO. 56825X C COMPLETE WITH COUPLING NUT.
  - 3. SUPPLY AND STOPS: CHICAGO NO. 1010-1003-3ABCP ANGLE STOP FITTING WITH SUPPLY TUBE AND LOOSE KEY AND LOW COMPRESSION OPERATING CARTRIDGE, CHROME PLATED BRASS CONSTRUCTION WITH 0.375-INCH FEMALE THREADED INLET AND SLIP WALL FLANGE WITH SET SCREW, RIGID SUPPLY RISER WITH REDUCER FOR 0.25-INCH FEMALE THREADED OUTLET.
  - 4. DRAIN: ELKAY NO. LK-35-B CRUMB CUP STRAINER WITH 1.5-INCH TAILPIECE.
  - 5. TRAP: MCGUIRE NO. 8089, 1.5 BY 1.5-INCH IPS OUTLET, CAST BRASS GROUND JOINT, SWIVEL TYPE, WITHOUT CLEANOUT, COMPLETE WITH NPS 1.5 CAST BRASS NIPPLE AND CAST SET-SCREW ESCUTCHEON.
- B. AVAILABLE MANUFACTURERS:
  - SINK: ELKAY, KOHLER
  - FAUCET: ELKAY, CHICAGO FAUCET CO., SPEAKMAN CO.
  - SUPPLIES, TRAPS AND MISC. TRIM: ACORN ENGINEERING CO., BRADLEY CORPORATION, BRASS-CRAFT MANUFACTURING, CHICAGO FAUCET CO., ELKAY MANUFACTURING CO.,

**23 0000 - HEATING, VENTILATION AND AIR CONDITIONING, HVAC**

- A. PROVIDE HVAC SYSTEMS, MATERIALS, AND EQUIPMENT AS SPECIFIED AND INDICATED ON THE DRAWINGS.
- B. PIPE SHALL BE CERTIFIED BY THE MANUFACTURER TO MEET REFERENCED STANDARDS AND SHALL BEAR A LABEL, DIRECTLY ON THE PIPE, INDICATING COMPLIANCE.
- C. DEMOLITION
  - 1. PERFORM REMOVAL WORK NEATLY WITH THE LEAST POSSIBLE DISTURBANCE TO THE BUILDING AND OCCUPANTS.
  - 2. REMOVE DEMOLITION DEBRIS FROM THE WORK AREA AND CLEAN THE WORK AREA ON A DAILY BASIS.
  - 3. PROVIDE TEMPORARY BARRIERS, DANGER SIGNALS, AND APPURTENANCES FOR PROTECTION OF PERSONNEL AND EQUIPMENT DURING REMOVAL OPERATIONS.
  - 4. DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT INACTIVE AND OBSOLETE PIPING, FITTINGS AND SPECIALTIES, EQUIPMENT, DUCTWORK, CONTROLS, FIXTURES, AND INSULATION.
  - 5. REMOVE ANCHORS, BOLTS, AND FASTENERS ASSOCIATED WITH PIPING, DUCTWORK AND EQUIPMENT TO BE REMOVED.
  - 6. PATCH AND REPAIR SURFACES DAMAGED DURING DEMOLITION WORK WITH MATERIALS AND FINISHES THAT MATCH EXISTING ADJACENT SURFACES.

**23 0500 - BASIC MATERIALS AND METHODS**

- A. PIPE JOINTING MATERIALS:
  - 1. PIPE JOINTING MATERIALS FOR SOLDERED JOINTS:
    - a. SOLDER: FREE OF LEAD, ANTIMONY AND ZINC. NO SOLDER CONTAINING LEAD IS PERMITTED.
    - b. FLUX: MEETING THE REQUIREMENTS OF NSF 61.
  - 2. PIPE JOINTING MATERIALS FOR THREADED JOINTS:
    - a. POLYTETRAFLUOROETHYLENE (PTFE) PIPE THREAD TAPE, "TEFLON".
    - b. PIPE CEMENT AND OIL COMPOUND: LITHARGE AND GLYCERINE.
    - c. GAS SERVICE: USE PTFE PIPE THREAD TAPE OR COMPOUND APPROVED FOR GAS SERVICE.
- B. MOTORS
  - 1. HIGH EFFICIENCY TYPE, MEETING THE NOMINAL AND MINIMUM EFFICIENCY LEVELS LISTED FOR EACH SPECIFIC HORSEPOWER IN TABLE 12-10 OF NEMA MG-1.
  - 2. POWER FACTOR: PROVIDE CAPACITORS AS REQUIRED FOR MOTORS AND PACKAGED EQUIPMENT TO ASSURE POWER FACTOR IS NOT LESS THAN 90 PERCENT.
- E. PIPE HANGERS AND SUPPORTS
  - 1. PRODUCTS SHALL BE IN ACCORDANCE WITH MANUFACTURERS STANDARDIZATION SOCIETY (MSS) STANDARD SP-58.
- F. CURBS AND FLASHINGS
  - 1. EQUIPMENT SUPPORTS: PATE COMPANY PLATFORM TYPE ROOF CURB. HEIGHT AS REQUIRED TO EXTEND 18 INCHES ABOVE ROOF SURFACE.
- G. VIBRATION CONTROL SUPPORTS
  - 1. AVAILABLE MANUFACTURERS:
    - AMBER/BOOTH COMPANY INC. KINETICS NOISE CONTROL MASON INDUSTRIES
  - 2. PROVIDE ENGINEERED SUPPORTS FOR EQUIPMENT AT LOCATIONS SHOWN ON DRAWINGS. UNITS SHALL PREVENT THE TRANSMISSION OF VIBRATION AND MECHANICALLY TRANSMITTED SOUND TO THE BUILDING STRUCTURE.
    - a. FAN COIL UNIT: SPRING ISOLATORS, MINIMUM 1-INCH DEFLECTION
    - b. EXHAUST FAN: RUBBER IN SHEAR
    - c. ACCU: 1-INCH WAFFLE PAD

**23 0800 - HVAC INSULATION**

- A. PIPING INSULATION:
  - 1. FIBERGLASS, 4-LB. DENSITY, K VALUE OF 0.23 AT 75 DEGREES F MEAN TEMPERATURE, WITH FACTORY APPLIED FIRE RETARDANT VAPOR BARRIER ALL SERVICE JACKET (ASJ). TAPE JOINTS WITH PRESSURE-SENSITIVE TAPE MATCHING JACKET. INSULATION SHALL BE CONTINUOUS THROUGH HANGERS AND PENETRATIONS FOR COLD PIPING. PROVIDE FLEXIBLE ELASTOMERIC INSULATION FOR REFRIGERANT PIPING. PROVIDE PVC JACKET FOR INSULATION EXPOSED TO THE WEATHER.
  - 2. THICKNESS SHALL BE AS FOLLOWS:
    - a. HEATING WATER PIPING: 1.5 INCHES.
    - b. REFRIGERANT PIPING: 1.0 INCH.
- B. DUCT INSULATION:
  - 1. INSULATE SUPPLY, RETURN AND EXHAUST DUCTS.
  - 2. CONCEALED DUCTS: FLEXIBLE FIBERGLASS INSULATION, ASTM C 553, TYPE 1, CLASS B-3, K FACTOR OF 0.27 AT 75 DEGREES MEAN TEMPERATURE, 1.0 LB DENSITY, 1.5 INCHES THICK. AS REQUIRED TO PREVENT SAGGING, PROVIDE MECHANICAL FASTENERS WHERE DUCTS ARE MORE THAN 30 INCHES WIDE. TAPE JOINTS WITH SELF-ADHESIVE TAPE MATCHING THE SERVICE JACKET.
  - 3. ADHESIVES FOR DUCT INSULATION INSIDE BUILDINGS: RECOMMENDED BY INSULATION MANUFACTURER FOR THE APPLICATION, EQUAL TO FOSTER PRODUCTS 85-20.
  - 4. ADHESIVE FASTENERS: EQUAL TO DURO DYNE OR GEMCO PERFORATED BASE ADHESIVE HANGER (PBH), MINIMUM 12-GAUGE ZINC-PLATED STEEL PIN WITH 2 INCH BY 2 INCH, 28 GAUGE GALVANIZED BASE AND SELF-LOCKING RETAINING WASHER. PIN LENGTH AS REQUIRED. COMPLY WITH ASTM-A591 AND SMACNA HVAC DUCT CONSTRUCTION FOR MECHANICAL FASTENERS. PEEL AND PRESS (SELF-STICKING) TYPE FASTENERS ARE NOT ACCEPTABLE.
  - 5. SELF-ADHESIVE TAPE: MANUFACTURER'S STANDARD TAPE OF MATERIAL MATCHING INSULATION JACKET, WITH PEELABLE BACKING AND PRESSURE-SENSITIVE ADHESIVE.

**23 1000 - BUILDING SERVICES: HVAC PIPING**


- A. VALVES
  - 1. WATER SHUTOFF: NPS 2 (DN 50) AND SMALLER: BALL VALVES; CLASS 150 SWP, BRONZE, TWO-PIECE BODY, CONVENTIONAL PORT, TFE SEATS AND SEALS. EXTENSION HANDLE FOR USE IN INSULATED PIPING, THREADED OR SOLDERED ENDS, NIBCO T-585-70-66 OR S-585-70-66.
  - 2. BALANCING VALVES: READABLE TYPE, RATED AT 250 PSI AND 250 DEG F. THROTTLING VALVE AND HIGH-SIGNAL VENTURI SECTION WITH QUICK-CONNECT SCHRAEDER PORTS AND MEMORY STOP, EQUAL TO TACO "ACCU-FLO". PROVIDE METER KIT WITH CASE.
    - a. SIZES NPS 2 (DN 50) AND SMALLER: BRONZE BALL TYPE VALVE, PTFE SEATS AND STEMS, ACCURACY WITHIN 2 PERCENT OF ACTUAL FLOW.
  - 3. DRAIN VALVES: CLASS 125, BRONZE CONSTRUCTION, NIBCO FIG 74.
- B. PIPING SPECIALTIES
  - 1. UNIONS NPS 2.5 (DN 65) AND SMALLER: MALLEABLE IRON, 200 PSI WORKING PRESSURE, WITH GROUND BRONZE SEATS; OR SOLDERED TYPE BRASS, EQUAL TO PRODUCTS OF ANVIL INTERNATIONAL.
  - 2. DIELECTRIC NIPPLES:
    - a. GENERAL: COMPLETELY ISOLATE DISSIMILAR METALS SO THAT ELECTRIC CURRENT IS BELOW 1 PERCENT OF THE GALVANIC CURRENT WHICH WOULD EXIST WITH METAL-TO-METAL CONTACT. GASKETS APPROVED FOR THE MEDIUM CARRIED BY THE PIPING SYSTEM.
    - b. DIELECTRIC NIPPLES: ELECTROPLATED STEEL NIPPLE WITH INERT AND NONCORROSIVE, THERMOPLASTIC LINING; PLAIN AND THREADED ENDS; AND 300-PSIG (2070-KPA) MINIMUM WORKING PRESSURE AT 225 DEGREES F (107 DEGREES C).
  - 3. AUTOMATIC AIR VENTS IN WATER PIPING: EQUAL TO HOFFMAN NO. 79. MANUAL VENTS: EQUAL TO BELL AND GOSSETT MODEL 4V.

**C. HEATING AND COOLING PIPING:**

- 1. COPPER TUBING, ASTM B88, TYPE L HARD DRAWN.
  - a. FITTINGS NPS 2 (DN 50) AND SMALLER: SOLDER JOINT CAST BRASS, ASME B16.18 OR WROUGHT FITTINGS, ASME B 16.22.
- 2. BLACK STEEL SCHEDULE 40 ASTM A 53 WITH CAST IRON FITTINGS, CLASS 125 (ASME B16.1, AND 16.4), CLASS 150 (ASME B16.3).
  - a. PIPING NPS 2 (DN 50) AND SMALLER: THREADED JOINTS.
- D. REFRIGERANT PIPING: HARD DRAWN COPPER TUBE, ASTM B 280 TYPE ACR, WITH WROUGHT COPPER SOLDER JOINT-TYPE FITTINGS, ASME B16.22. BRAZING SOLDER: MINIMUM 15 PERCENT SILVER CONTENT. BRAZE REFRIGERANT PIPING USING OIL-PUMPED NITROGEN ATMOSPHERE IN PIPE TO PREVENT OXIDATION. PRESSURE TEST, EVACUATE, AND CHARGE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
4	BID DOCUMENTS - REVISED FINAL	6/21/2023


P. 1992



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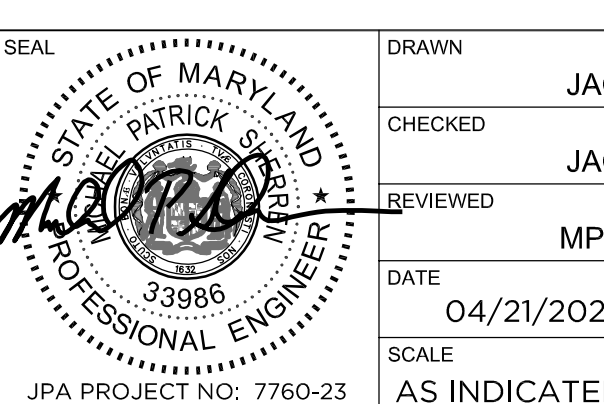
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 33988, Expiration date: 01-16-2025.

PROJECT  
**Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation**

10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

DRAWING TITLE  
**MECHANICAL SPECIFICATIONS**

SEAL	DRAWN JAG	PROJECT # 23001.00
CHECKED JAG	DRAWING #	
REVIEWED MPS	DATE 04/21/2023	<b>M7.01</b>
DATE	SCALE AS INDICATED	



MECHANICAL SPECIFICATIONS (CONTINUED)

A. PIPING TESTS: PRESSURE TEST PIPING SYSTEMS WITH FOLLOWING PRESSURES FOR FOUR HOURS WITH NO LOSS OF PRESSURE:

Table with 3 columns: SERVICE, TEST PRESSURE, MEDIUM. Rows include HEATING WATER, REFRIGERANT LIQUID, and REFRIGERANT SUCTION.

23 7000 - HVAC EQUIPMENT

A. FAN COIL UNIT

- 1. BLOWER COIL TYPE WITH WATER COIL FOR HEATING AND DIRECT-EXPANSION COIL FOR COOLING WITH CAPACITIES SHOWN AND SCHEDULED ON THE DRAWINGS.
2. AVAILABLE MANUFACTURERS:
a. CARRIER CORPORATION
b. DAIKIN
c. TRANE COMPANY
d. INTERNATIONAL ENVIRONMENTAL
3. COILS: COPPER TUBES, ALUMINUM FINNS.
4. DRAIN PANS: MINIMUM SLOPE 0.25 INCH PER FOOT IN TWO DIRECTIONS...

B. DUCT-MOUNTED ELECTRIC HEATING COIL: EQUAL TO INDEECO ZUB OPEN COIL HEATER OF VOLTAGE, SIZE AND WATTAGE INDICATED ON DRAWINGS. PROVIDE COMPLETE WITH SCR CONTROLS.

C. AIR-COOLED CONDENSING UNIT

- 1. AVAILABLE MANUFACTURERS:
a. CARRIER CORPORATION
b. DAIKIN
c. TRANE COMPANY
2. PERFORMANCE: WITH STANDARD CONTROLS. UNIT SHALL OPERATE AT CAPACITY SHOWN ON DRAWINGS WHEN AMBIENT AIR IS WITHIN THE RANGE FROM 95 DEGREES F TO LOW AMBIENT TEMPERATURE OF 0 DEGREES F.
3. COIL: ALUMINUM FINNS BONDED TO COPPER TUBES.
4. CONDENSER FANS AND MOTORS: FANS SHALL BE ARRANGED FOR VERTICAL DISCHARGE WITH SAFETY GUARD FOR EACH FAN...

C. CARBON MONOXIDE EXHAUST SYSTEM

- 1. AVAILABLE MANUFACTURERS:
a. CAR-MON PRODUCTS
b. ENGWALD CORPORATION
c. AMMERMAN COMPANY
2. PROVIDE COMPLETE CARBON MONOXIDE EXHAUST DUCTWORK SYSTEM INCLUDING ALL DUCTWORK, AIRFLOW TEES AND FLEXIBLE TUBING WITH EXHAUST STACK ADAPTORS.
3. DUCTWORK TO BE MINIMUM 24 GAGE GALVANIZED LOCKSEAM CONSTRUCTION WITH SINGLE LONGITUDINAL SEAM...

23 8000 - AIR DISTRIBUTION

A. DUCTWORK

- 1. CONSTRUCTION: CONSTRUCT DUCT SYSTEMS IN ACCORDANCE WITH HVAC DUCT CONSTRUCTION SCHEDULE ON DRAWING M5.01.
2. DUCTWORK SHALL BE GALVANIZED SHEET STEEL, ASTM A653/A, G90 COATING, EXCEPT WHERE OTHERWISE NOTED ON THE DRAWINGS.
a. SEAL JOINTS AND SEAMS WITH UL CLASSIFIED, FIRE-RESISTIVE, BRUSH-ON WATER-BASED VINYL ACRYLIC SEALING MASTIC...
3. AIR DUCT LEAKAGE TESTS
a. LEAKAGE TEST PROCEDURES SHALL BE IN ACCORDANCE WITH SMACNA LEAKAGE TEST MANUAL...
b. NOTIFY PARTIES WHOSE PRESENCE IS NECESSARY FOR THE TEST...
c. IF TEST DUCT SECTIONS EXCEED THE ALLOTTED LEAKAGE LEVELS...

B. DUCT ACCESSORIES

- 1. FLEXIBLE JOINT FABRIC: WOVEN GLASS FABRIC WITH COATING, COMPLYING WITH UL 214 FOR FIRE RETARDANCE AND NFPA 90A FOR USE IN DUCT SYSTEMS...
2. AIR TURNING VANES: DOUBLE VANE TYPE, IN ACCORDANCE WITH SMACNA HVAC DCS, SAME MATERIAL AS THE DUCT.

- 3. DUCT ACCESS DOORS: SMACNA STANDARD CONSTRUCTION, COMPLY WITH NFPA 90A, MINIMUM SIZE 16 INCHES (406 MM) BY 16 INCHES (406 MM) BY 16 INCHES (406 MM) BY MAXIMUM DUCT DIMENSION...
4. SOUND ATTENUATORS: EQUAL TO PRICE MODEL RL.
a. FACTORY-FABRICATED, NON-COMBUSTIBLE, MOISTURE-RESISTANT, AND ODORLESS, 22 GAUGE GALVANIZED STEEL OUTER CASING...
b. ACOUSTICAL PERFORMANCE SHALL BE CERTIFIED BY AN INDEPENDENT LABORATORY TESTING AGENCY...
5. MANUAL VOLUME DAMPERS:
a. 12 INCHES (305 MM) OR LESS IN HEIGHT: FABRICATED FROM 16 GAUGE METAL WITH HEMMED EDGES...

C. DIFFUSERS, REGISTERS AND GRILLES

- 1. DEVICES: KRUEGER MODEL NUMBERS LISTED OR EQUAL BY PRICE, TITUS OR NAILOR. DEVICES SHALL BE STEEL WITH WHITE PAINTED FINISH, UNLESS OTHERWISE SPECIFIED.
a. SUPPLY DIFFUSERS
(1) SQUARE AND RECTANGULAR CEILING DIFFUSERS: SERIES SH WITH SQUARE NECK AS INDICATED AND REMOVABLE CORE...
(2) FRAME STYLE 23 (PANEL DIFFUSER): DIFFUSERS MOUNTED IN NOMINAL 24-INCH BY 24-INCH FLAT STEEL PANELS AS INDICATED ON THE DRAWINGS...
b. RETURN REGISTERS
(1) PROVIDE OPPOSED-BLADE DAMPERS WITH LINKAGE AND ADJUSTMENT THROUGH GRILLE FACE WITH A SCREWDRIVER OR ALLEN WRENCH...

23 9000 - HVAC INSTRUMENTATION AND CONTROLS

A. PROVIDE AN EXTENSION OF EXISTING SYSTEM OF DIRECT DIGITAL TEMPERATURE CONTROLS WITH ELECTRONIC OR ELECTRIC ACTUATION. CONTROL SYSTEM MANUFACTURER SHALL BE TRIDIUM DIRECT DIGITAL CONTROL (DDC) SYSTEM COMPONENTS INSTALLED BY EASI AND FULLY INTEGRATED INTO THE EXISTING BUILDING DDC SYSTEM.

B. WIRING AND DEVICES:

- 1. WIRING AND ELECTRICAL DEVICES SHALL BE UL LISTED AND COMPLY WITH NFPA 70 (THE NATIONAL ELECTRIC CODE).
2. PROVIDE PLENUM-RATED, COLOR-CODED CONTROL WIRING OF TYPE, SIZING, AND CONFIGURATION TO MEET THE REQUIREMENTS OF THE CONTROL REQUIREMENTS AND SEQUENCES OF OPERATION INDICATED ON THE DRAWINGS.
3. INSTALL CONTROL WIRING IN ELECTRICAL METALLIC TUBING (EMT), MINIMUM SIZE 0.5 INCH.
a. EXCEPTION: CONDUIT IS NOT REQUIRED FOR CLASS 2 WIRING IN CONCEALED ACCESSIBLE LOCATIONS...
4. POWER SOURCE
a. 120-VOLT AC CIRCUITS USED FOR THE ATC SYSTEM SHALL BE TAKEN FROM PANELBOARDS PROVIDED UNDER ELECTRICAL REQUIREMENTS...
b. CIRCUITS SHALL BE DEDICATED TO THE ATC SYSTEM AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.

C. HVAC CONTROL DEVICES

- 1. EACH ROOM TEMPERATURE SENSOR SHALL BE PROVIDED WITHOUT DISPLAYS AND INCLUDE BOTH A WARMER/COOLER SETPOINT ADJUSTMENT DIAL AND A TERMINAL JACK...
2. HUMIDITY SENSOR: WALL-MOUNTED, RANGE SHALL BE 10 TO 90 PERCENT WITH +/- 3 PERCENT RH ACCURACY...
3. OUTDOOR AIR (OA) DAMPERS SHALL BE EQUAL TO RUSKIN CD 50 LOW-LEAKAGE DAMPER...

D. CONTROL DAMPERS

- 1. DAMPERS SHALL BE OPPOSED BLADE, EXTRUDED ALUMINUM CONSTRUCTION WITH LINKAGE OUT OF AIRSTREAM...
2. VALVES NPS 2 (DN 50) AND SMALLER: SINGLE-SEATED GLOBE TYPE WITH AN EQUAL PERCENTAGE FLOW CHARACTERISTIC VALVE PLUG...

E. CONTROL VALVES

- 1. TWO-WAY AND THREE-WAY VALVES SHALL BE SIZED BY THE CONTROL SUBCONTRACTOR AND GUARANTEED TO BE OF SUFFICIENT SIZE TO MEET THE HEATING OR COOLING REQUIREMENTS...
2. VALVES NPS 2 (DN 50) AND SMALLER: SINGLE-SEATED GLOBE TYPE WITH AN EQUAL PERCENTAGE FLOW CHARACTERISTIC VALVE PLUG...

F. DIRECT DIGITAL CONTROLS

- 1. THE BUILDING DIRECT DIGITAL CONTROL SYSTEM SHALL CONSIST OF NETWORK DDC PANELS AND NETWORK APPLICATION-SPECIFIC CONTROLLERS AND AN EXISTING COMPUTER OPERATOR WORKSTATION.
2. THE SYSTEM SHALL BE MODULAR AND SHALL PERMIT EXPANSION OF BOTH CAPACITY AND FUNCTIONALITY THROUGH THE ADDITION OF SENSORS, ACTUATORS, DDC PANELS...
3. SYSTEM ARCHITECTURAL DESIGN SHALL ELIMINATE DEPENDENCE UPON ANY SINGLE DEVICE FOR ALARM REPORTING AND CONTROL EXECUTION...
4. REVISE EXISTING OPERATOR'S WORKSTATION GRAPHICS TO INCLUDE NEW CONTROLS AND MONITORING POINTS PROVIDED UNDER THIS CONTRACT.

23 9500 - TESTING, ADJUSTING AND BALANCING

- A. BALANCE AIR DISTRIBUTION SYSTEMS AND HYDRONIC SYSTEMS INDICATED ON THE DRAWINGS. TESTING AND BALANCING WORK SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
1. NATIONAL STANDARDS FOR TESTING AND BALANCING HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS...
2. PROCEDURAL STANDARDS FOR TESTING ADJUSTING BALANCING OF ENVIRONMENTAL SYSTEMS...
B. SUBMIT CERTIFIED BALANCING REPORT. SUBMIT THREE COPIES OF THE FINAL REPORT AND CERTIFICATES, BOUND INTO BOOKLETS.

END OF MECHANICAL SPECIFICATIONS

Table with 3 columns: NO, REVISION / SUBMISSION, DATE. Rows 1-4 showing submission and document milestones.

SM+P ARCHITECTS logo and contact information for SCHAMU MACHOWSKI + PATTERSON ARCHITECTS, INC.

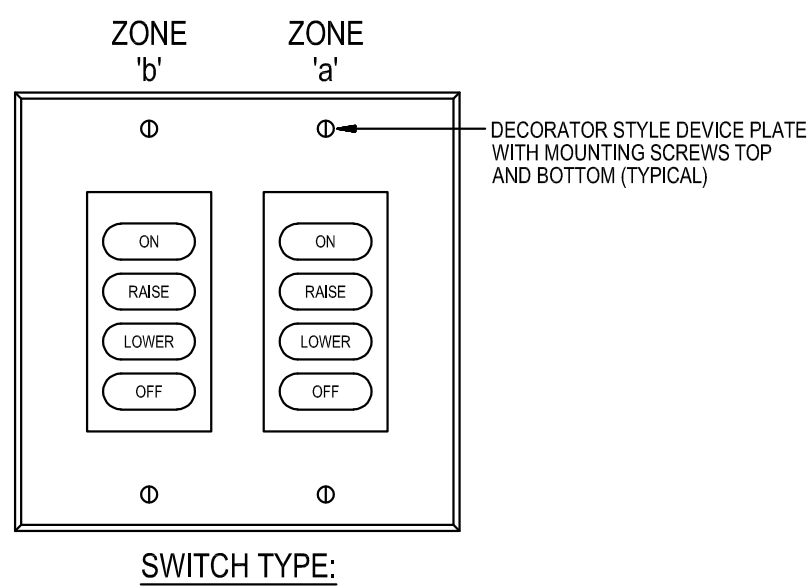
STRUCTURAL CONSULTANTS section with COLUMBIA ENGINEERING and JAMES POSEY ASSOCIATES logo and address.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 33986, Expiration date: 01-16-2025.

PROJECT: Howard County Public School System Applications and Research Laboratory (ARL) Automotive Lab Renovation, 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

DRAWING TITLE: MECHANICAL SPECIFICATIONS

Professional Engineer Seal for James Posey Associates, Inc. and drawing metadata including PROJECT # 23001.00, DRAWING # M7.02, DATE 04/21/2023, SCALE AS INDICATED.



**OPERATIONAL SEQUENCE:**

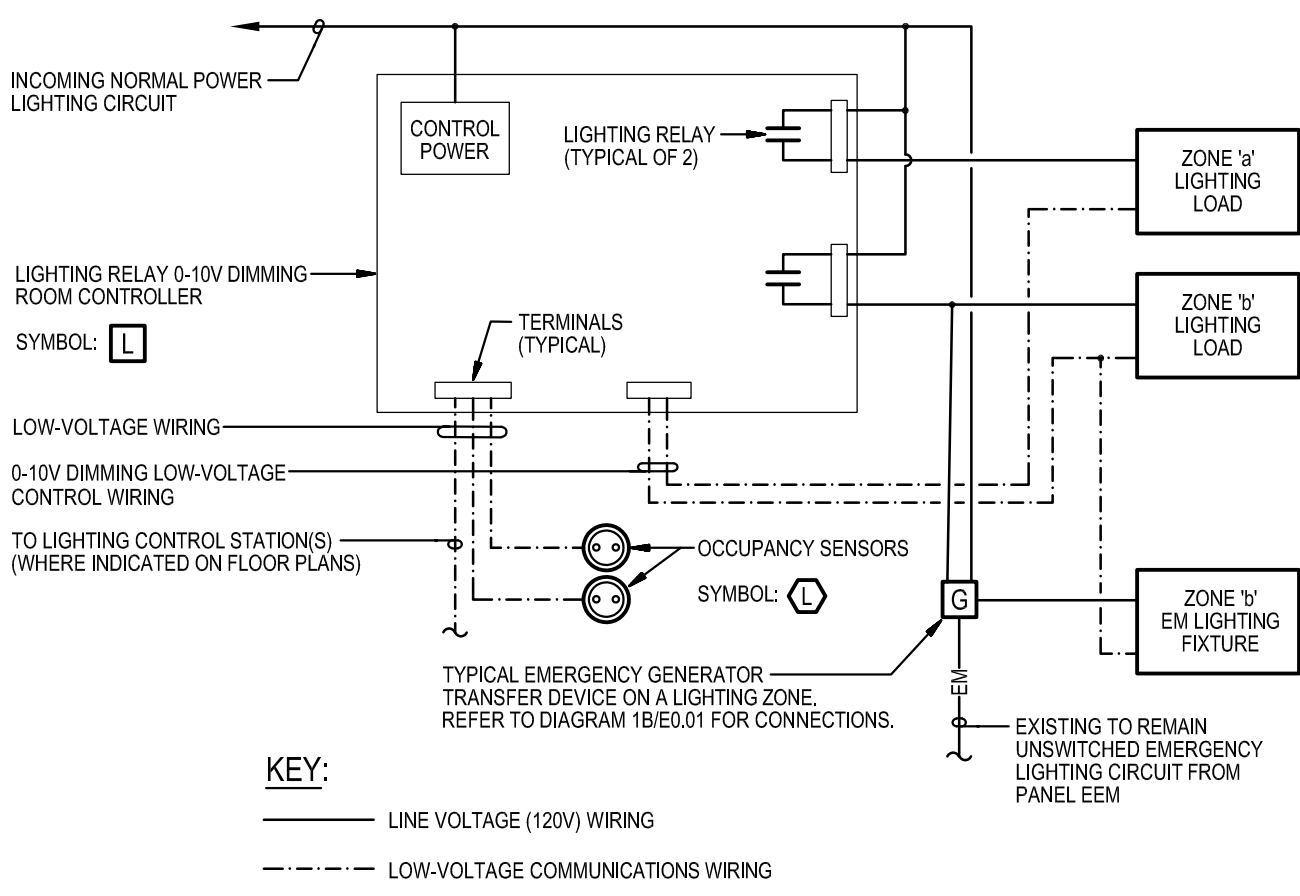
- A. INITIAL ENTRY INTO THE SPACE SHALL REQUIRE MANUAL ACTIVATION OF LIGHTING FIXTURES THROUGH LOCAL LIGHTING CONTROL STATIONS.
- B. LOCATE LIGHTING CONTROL STATION FOR ZONE 'a' NEAREST ZONE 'a' LIGHTING FIXTURES, AND LOCATE LIGHTING CONTROL STATION FOR ZONE 'b' NEAREST ZONE 'b' LIGHTING FIXTURES.
- C. BUTTONS AT LIGHTING CONTROL STATIONS SHALL PROVIDE THE FOLLOWING CONTROL FUNCTIONS:

- CONTROL ZONE 'a'**
- 1. ON: ZONE 'a' LIGHTING FIXTURES SHALL TURN ON TO 100% LIGHT OUTPUT.
  - 2. RAISE BUTTON SHALL MANUALLY RAISE THE LIGHT OUTPUT OF ZONE 'a' LIGHTING FIXTURES.
  - 3. LOWER BUTTON SHALL MANUALLY LOWER THE LIGHT OUTPUT OF ZONE 'a' LIGHTING FIXTURES.
  - 4. OFF: ZONE 'a' LIGHTING FIXTURES SHALL TURN OFF.

- CONTROL ZONE 'b'**
- 5. ON: ZONE 'b' LIGHTING FIXTURES SHALL TURN ON TO 100% LIGHT OUTPUT.
  - 6. RAISE BUTTON SHALL MANUALLY RAISE THE LIGHT OUTPUT OF ZONE 'b' LIGHTING FIXTURES.
  - 7. LOWER BUTTON SHALL MANUALLY LOWER THE LIGHT OUTPUT OF ZONE 'b' LIGHTING FIXTURES.
  - 8. OFF: ZONE 'b' LIGHTING FIXTURES SHALL TURN OFF.

- D. WHEN OCCUPANCY IS NOT DETECTED FOR 20 MINUTES, LIGHTING FIXTURES IN THE SPACE SHALL TURN OFF. MANUAL REACTIVATION SHALL BE REQUIRED.

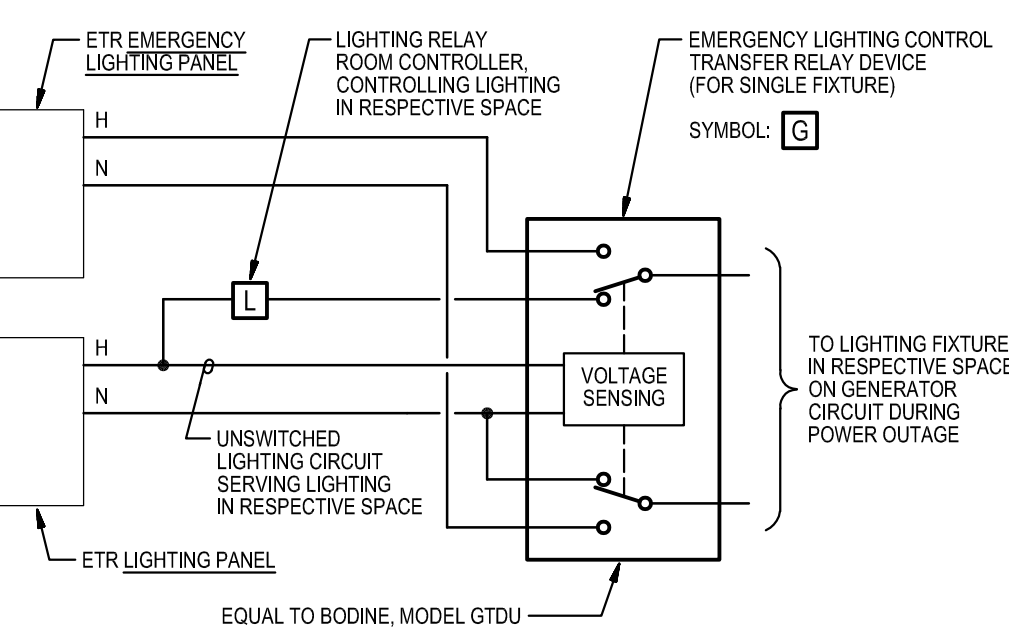
**1 LIGHTING CONTROLS SCHEME CLASSROOM NO SCALE**



**DIAGRAM NOTES:**

- 1. UPON LOSS OF POWER, LIGHT FIXTURES ON EMERGENCY POWER SHALL ILLUMINATE TO 100% LIGHT OUTPUT REGARDLESS OF OCCUPANCY UNTIL NORMAL POWER IS RESTORED.
- 2. LOW-VOLTAGE WIRING IS NOT SHOWN ON PLANS. PROVIDE LOW-VOLTAGE CONDUCTORS AS SHOWN ON THIS DIAGRAM AND MAKE CONNECTIONS REQUIRED FOR COMPLETE INSTALLATION.
- 3. GROUNDING AND NEUTRAL CONDUCTORS ARE NOT SHOWN ON DIAGRAM.

**1A LIGHTING CONTROLS DIAGRAM LIGHTING RELAY ROOM CONTROLLER CLASSROOM NO SCALE**

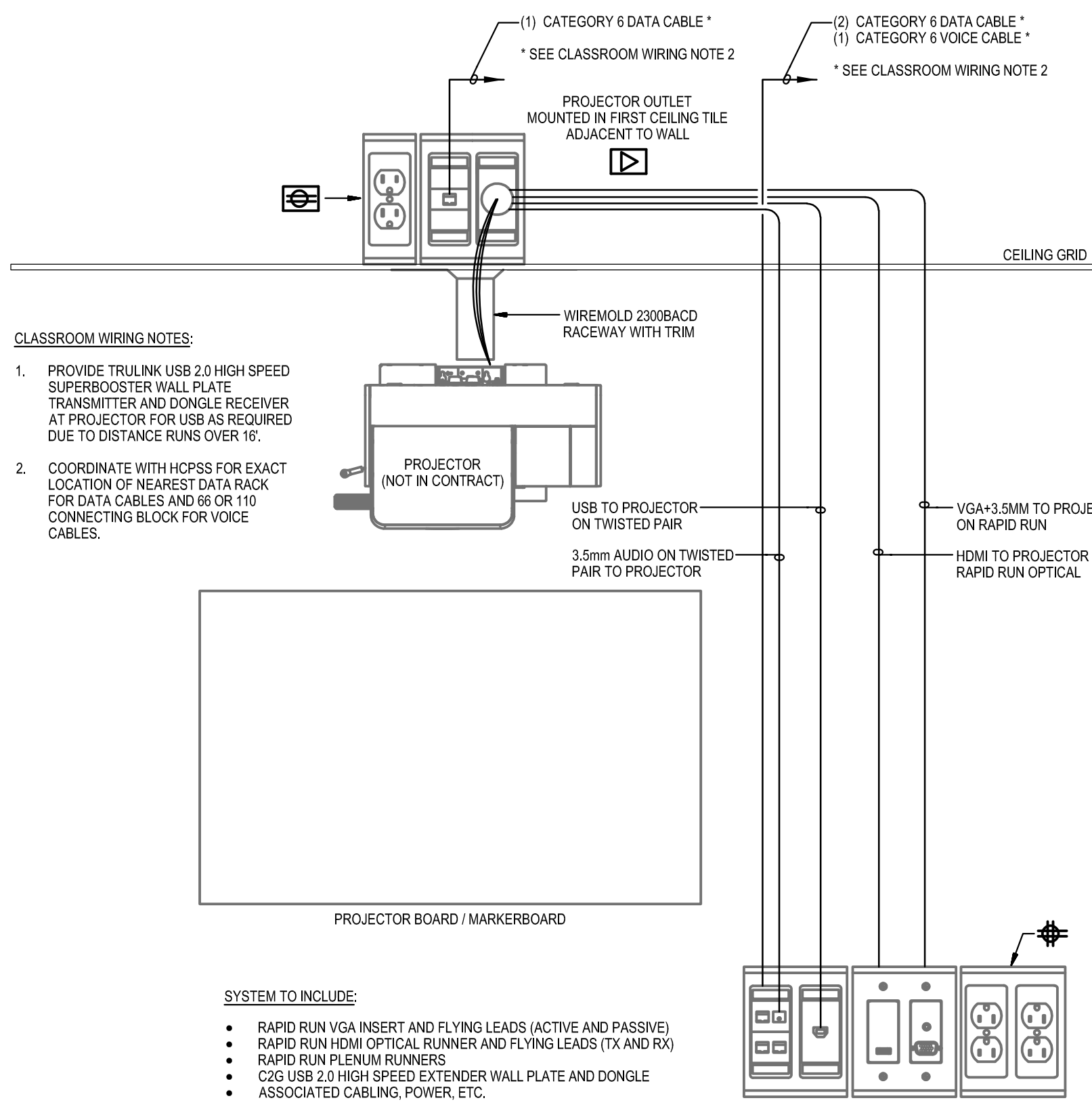


**1B LIGHTING CONTROLS DIAGRAM GENERATOR TRANSFER DEVICE CLASSROOM NO SCALE**

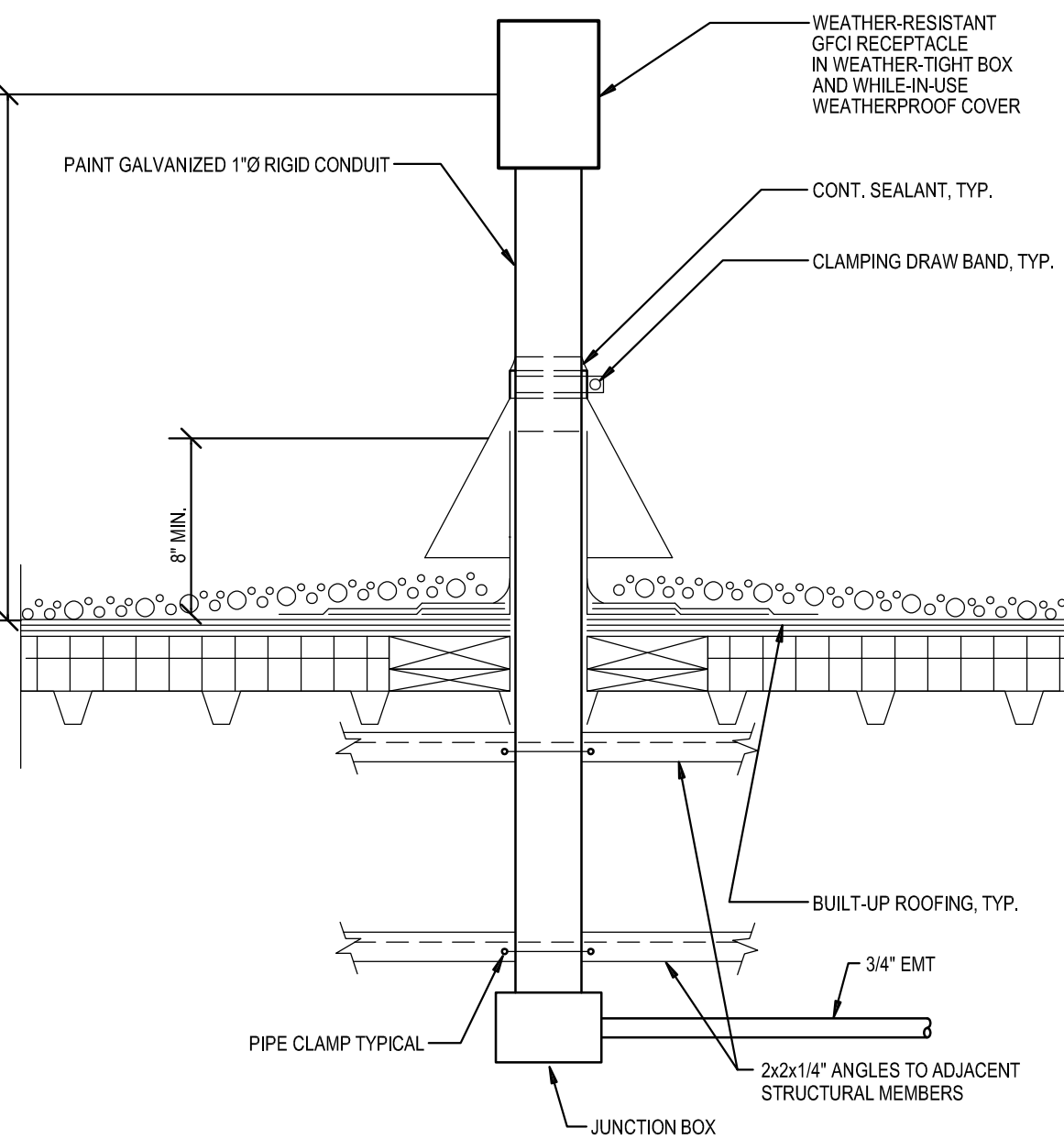
TYPE	DESCRIPTION	LAMPICCT	NOMINAL LUMENS	MAXIMUM WATTAGE	MINIMUM EFFICACY	VOLTAGE	DRIVER	MOUNTING	BASIS OF DESIGN		NOTES
									MANUFACTURER	CATALOG NUMBER	
PA1	HIGH BAY FIXTURE WITH STEEL HOUSING, DIFFUSE OPTICS, WIDE DISTRIBUTION, AND WHITE FINISH.	LED 4000K	24000 LM	164 W	146 LM/W	120-277	INTEGRAL 0-10V	SUSPENDED (14'-0" AFF)	COLUMBIA	ECH1-840-L24-DW-ED-U-ST	--
PB1	NOMINAL 4-INCH WIDE LINEAR STRIP FIXTURE WITH STEEL HOUSING, CURVED ACRYLIC LENS, WIDE DISTRIBUTION, AND WHITE FINISH.	LED 4000K	6700 LM	47 W	143 LM/W	120-277	INTEGRAL 0-10V	SUSPENDED (12'-0" AFF)	COLUMBIA	MPS4-40-VL-C-W-ED-U	--
RA1	2 FT BY 2 FT LED FLAT PANEL FIXTURE WITH EXTRUDED ALUMINUM FRAME, ACRYLIC LENS, AND MATTE WHITE FINISH.	LED 4000K	2800 LM	23 W	128 LM/W	120-277	INTEGRAL 0-10V	RECESSED	COLUMBIA	SRP22-40-LW-G-ED-U	--

**GENERAL NOTES:**

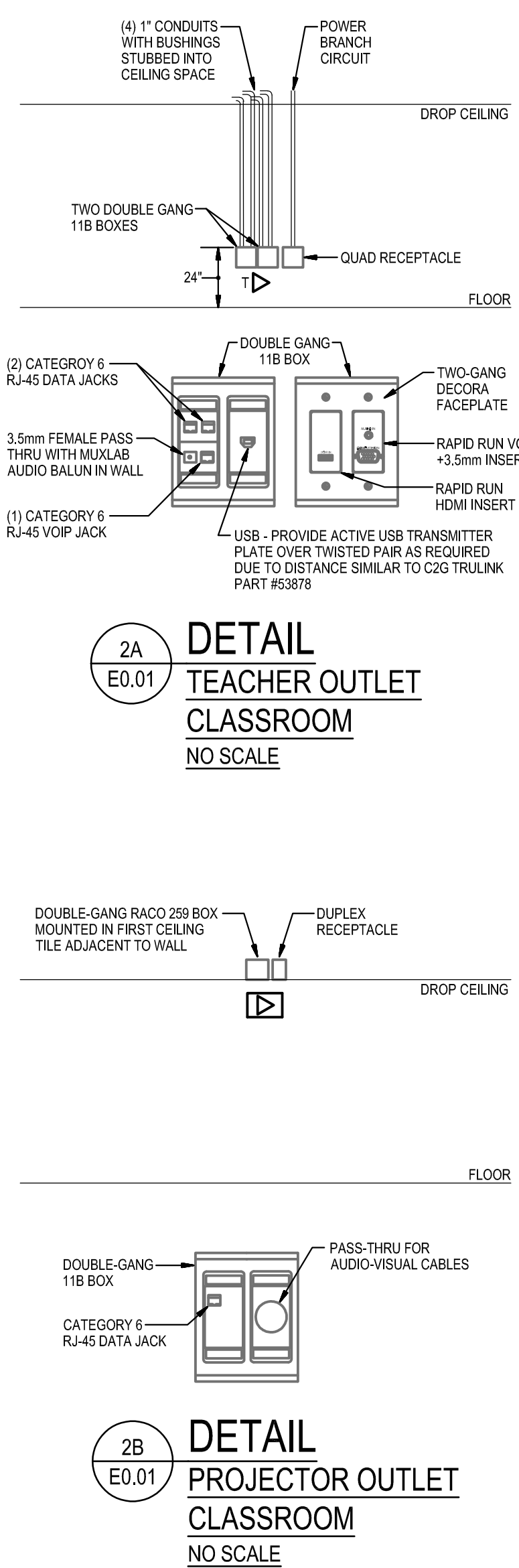
- A. APPROVED EQUALS: MANUFACTURERS FOUND TO OFFER PRODUCTS SIMILAR TO THE BASIS-OF-DESIGN PRODUCT, INCLUDING PERFORMANCE, APPEARANCE, AND QUALITY. LISTED EQUALS MUST COMPLY WITH THE PERFORMANCE CRITERIA LISTED. ADDITIONAL DOCUMENTATION SHALL BE MADE AVAILABLE UPON REQUEST.
- B. INTERIOR LIGHTING FIXTURES SHALL BE PROVIDED WITH 4000K COLOR TEMPERATURE, WITHIN +/- 100K, AND WITHIN THREE MCADAM ELLIPSES, UNLESS OTHERWISE NOTED ABOVE. COLOR RENDERING INDEX SHALL BE 85 OR GREATER, UNLESS OTHERWISE NOTED ABOVE.



**2 DIAGRAM COMMUNICATIONS CLASSROOM NO SCALE**



**3 DETAIL DEVICE BOX INSTALLATION ON ROOF NOT TO SCALE**



**ABBREVIATIONS**

- ① DENOTES REFERENCE TO SPECIFIC NOTE ON DRAWING.
- 1/E0.01 DETAIL, DIAGRAM, OR PLAN NUMBER
- 1/E0.01 DETAIL, DIAGRAM OR PLAN REFERENCE, DETAIL, DIAGRAM, OR PLAN NUMBER/DRAWING NUMBER

**NOTES:**

- A. PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR EACH BRANCH CIRCUIT.
- B. THE EXISTING FACILITY WILL REMAIN IN OPERATION DURING RENOVATION. INTERRUPTION TO THE EXISTING BUILDING ELECTRIC SERVICE SHALL BE COORDINATED WITH THE USER TO MINIMIZE DISRUPTION. INTERRUPTION OF UTILITIES SHALL NOT OCCUR DURING SCHOOL WORK HOURS.

**ABBREVIATIONS**

- A AMPERE(S)
- AFF ABOVE FINISHED FLOOR
- ACCU AIR-COOLED CONDENSING UNIT
- AHU AIR-HANDLING UNIT
- AIC AMPERES INTERRUPTING CAPACITY
- C CONDUIT
- DX DISCONNECT EXISTING
- EF EXHAUST FAN
- EM EMERGENCY
- ETR EXISTING TO REMAIN
- FT FOOT (DISTANCE)
- G GROUND
- HCPSS HOWARD COUNTY PUBLIC SCHOOL SYSTEM
- HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE
- HP HORSEPOWER
- K KELVIN (LIGHTING COLOR TEMPERATURE)
- KW KILOWATTS
- LM (LUMENS)
- MCA MINIMUM CIRCUIT AMPACITY
- MOP MAXIMUM OVERCURRENT PROTECTION
- NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- P POLE(S)
- PUH PROPELLER UNIT HEATER
- TV TELEVISION
- USB UNIVERSAL SERIAL BUS
- V VOLT(S)
- VGA VIDEO GRAPHICS ARRAY
- VOIP VOICE-OVER INTERNET PROTOCOL
- W WIRE(S) OR WATT(S)
- Ø PHASE

**ELECTRICAL SYMBOLS AND ABBREVIATIONS**

**DEMOLITION**

- DISCONNECT AND REMOVE EXISTING SUSPENDED LIGHTING FIXTURE ON SWITCHED LIGHTING CIRCUIT. ASSOCIATED SWITCHED LIGHTING CIRCUIT SHALL REMAIN AND BE REUSED.
- DISCONNECT AND REMOVE EXISTING SUSPENDED LIGHTING FIXTURE ON UNSWITCHED EMERGENCY LIGHTING CIRCUIT. ASSOCIATED LIGHTING CIRCUIT SHALL REMAIN AND BE REUSED.
- DISCONNECT AND REMOVE EXISTING RECESSED MOUNTED 2' X 4' LIGHTING FIXTURE. REMOVE ASSOCIATED WIRING AND CONDUIT WITHIN CLASSROOM A101 AND PARTS STORAGE A100 BACK TO AN EXISTING JUNCTION BOX WITHIN CLASSROOM. ASSOCIATED NORMAL AND EMERGENCY LIGHTING CIRCUITS SHALL REMAIN AND BE REUSED.
- DISCONNECT AND REMOVE EXISTING LINE-VOLTAGE TOGGLE SWITCHES.
- DISCONNECT EXISTING HARD-WIRED CONNECTION.
- DISCONNECT EXISTING MOTOR CONNECTION.
- DISCONNECT AND REMOVE EXISTING RECEPTACLE. REMOVE ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST JUNCTION BOX IN CEILING. EXISTING RECEPTACLE CIRCUIT SHALL REMAIN AND BE REUSED.
- DISCONNECT AND REMOVE EXISTING PROJECTOR RECEPTACLE, CEILING MOUNTED.
- DISCONNECT AND REMOVE EXISTING COMMUNICATIONS OUTLET WITH ONE DATA JACK AND ONE VOICE JACK. REMOVE DATA CABLING BACK TO ASSOCIATED PATCH PANEL AND VOICE CABLING BACK TO ASSOCIATED CONNECTING BLOCK.
- DISCONNECT AND REMOVE EXISTING COMMUNICATIONS OUTLET WITH TWO DATA JACKS. REMOVE DATA CABLING BACK TO ASSOCIATED PATCH PANEL.
- DISCONNECT AND REMOVE EXISTING VIDEO OUTLET, WALL AND CEILING MOUNTED. REMOVE ASSOCIATED CABLING BACK TO SOURCE.

**EXISTING**

- EXISTING TO REMAIN 120/208V PANELBOARD, SURFACE MOUNTED.
- EXISTING TO REMAIN RECEPTACLE, RECESSED MOUNTED.
- EXISTING TO REMAIN RECEPTACLE, SURFACE MOUNTED.
- EXISTING DATA WIRELESS ACCESS POINT, CEILING MOUNTED, TO BE CAREFULLY REMOVED, STORED, AND RELOCATED.
- EXISTING TO REMAIN PUBLIC ADDRESS SYSTEM SPEAKER, WALL MOUNTED.
- EXISTING FIRE ALARM SYSTEM NOTIFICATION DEVICE, WALL MOUNTED, TO BE CAREFULLY REMOVED, STORED, AND RELOCATED. PROVIDE SURFACE MOUNTED BOX AND CONDUIT UP TO ACCESSIBLE CEILING SPACE AND RECONNECT EXISTING FIRE ALARM CABLING AS REQUIRED.

**WIRING**

- HOMERUN TO PANELBOARD.
- WIRING IN CONDUIT RUN CONCEALED IN WALL CONSTRUCTION OR CEILING SPACE AND RUN EXPOSED IN OPEN CEILING AND ON EXISTING WALLS.

**LIGHTING**

- SUSPENDED LIGHTING FIXTURE, TYPE AS DESIGNATED. CONNECT TO EXISTING SWITCHED LIGHTING CIRCUIT.
- SUSPENDED LIGHTING FIXTURE, UNSWITCHED, TYPE AS DESIGNATED. CONNECT TO EXISTING UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
- RECESS MOUNTED 2' X 2' LIGHTING FIXTURE, TYPE AS DESIGNATED. LOWER CASE LETTER DESIGNATES LIGHTING ZONE.
- RECESS MOUNTED 2' X 2' LIGHTING FIXTURE, TYPE AS DESIGNATED. CONNECT TO EMERGENCY CIRCUIT VIA GENERATOR TRANSFER DEVICE. LOWER CASE LETTER DESIGNATES LIGHTING ZONE.

**POWER**

- HARD-WIRED ELECTRICAL CONNECTION. CONNECT TO EQUIPMENT INDICATED.
- ELECTRIC MOTOR CONNECTION.
- COMBINATION MOTOR STARTER WITH NON-FUSED DISCONNECT IN NEMA TYPE 4X STAINLESS STEEL ENCLOSURE, UNLESS OTHERWISE NOTED. MOUNT 5'-6" ABOVE FLOOR TO TOP OF ENCLOSURE. RATING AND FUSING AS NOTED.
- ENCLOSED SWITCH (DISCONNECT/SAFETY SWITCH) IN NEMA TYPE 4X STAINLESS STEEL ENCLOSURE, UNLESS OTHERWISE NOTED. MOUNT 5'-6" ABOVE FLOOR TO TOP OF ENCLOSURE. RATING AND FUSING AS NOTED.
- DUPLEX RECEPTACLE (NEMA 5-20R), SURFACE WALL MOUNTED 24" ABOVE FLOOR TO TOP OF BOX. UTILIZE SURFACE METAL RACEWAY TO SERVE RECEPTACLE.
- DUPLEX RECEPTACLE (NEMA 5-20R), GFCI-TYPE, WEATHER-RESISTANT TYPE WITH WHILE-IN-USE WEATHERPROOF COVER, MOUNTED 18" ABOVE ROOF TO CENTER OF BOX. REFER TO DETAIL 3/E0.01 FOR MOUNTING REQUIREMENTS.
- DUPLEX RECEPTACLE (NEMA 5-20R), GFCI-TYPE, SURFACE WALL MOUNTED 48" ABOVE FLOOR TO TOP OF BOX.
- DOUBLE-DUPLEX (QUAD) RECEPTACLE (NEMA 5-20R), SURFACE WALL MOUNTED 24" ABOVE FLOOR, UNLESS OTHERWISE NOTED, TO TOP OF BOX. UTILIZE SURFACE METAL RACEWAY FOR RECEPTACLE CIRCUIT, RUN HORIZONTALLY ON WALL.
- DUPLEX RECEPTACLE (NEMA 5-20R), RECESSED MOUNTED IN CEILING TILE. LOCATE ADJACENT TO WALL.
- LINE-VOLTAGE TOGGLE SWITCH IN SURFACE-MOUNTED OUTLET BOX, 48" ABOVE FLOOR TO TOP OF BOX.

**COMMUNICATIONS**

- TEACHER OUTLET WITH TWO DOUBLE-GANG BOXES, RECESSED WALL MOUNTED 24" ABOVE FLOOR TO TOP OF BOX. REFER TO DIAGRAM 2A/E0.01 FOR ADDITIONAL INFORMATION.
- PROJECTOR OUTLET WITH ONE SINGLE-GANG BOX, RECESSED MOUNTED IN CEILING TILE. LOCATE ADJACENT TO WALL. REFER TO DIAGRAM 2B/E0.01 FOR ADDITIONAL INFORMATION.

NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
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4	BID DOCUMENTS - REVISED FINAL	6/21/2023

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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2024.

**PROJECT**

Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation

10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

**DRAWING TITLE**

SYMBOLS, DIAGRAMS, DETAILS,  
AND SCHEDULE - ELECTRICAL

PROJECT # 23001.00  
DRAWING #  
**E0.01**

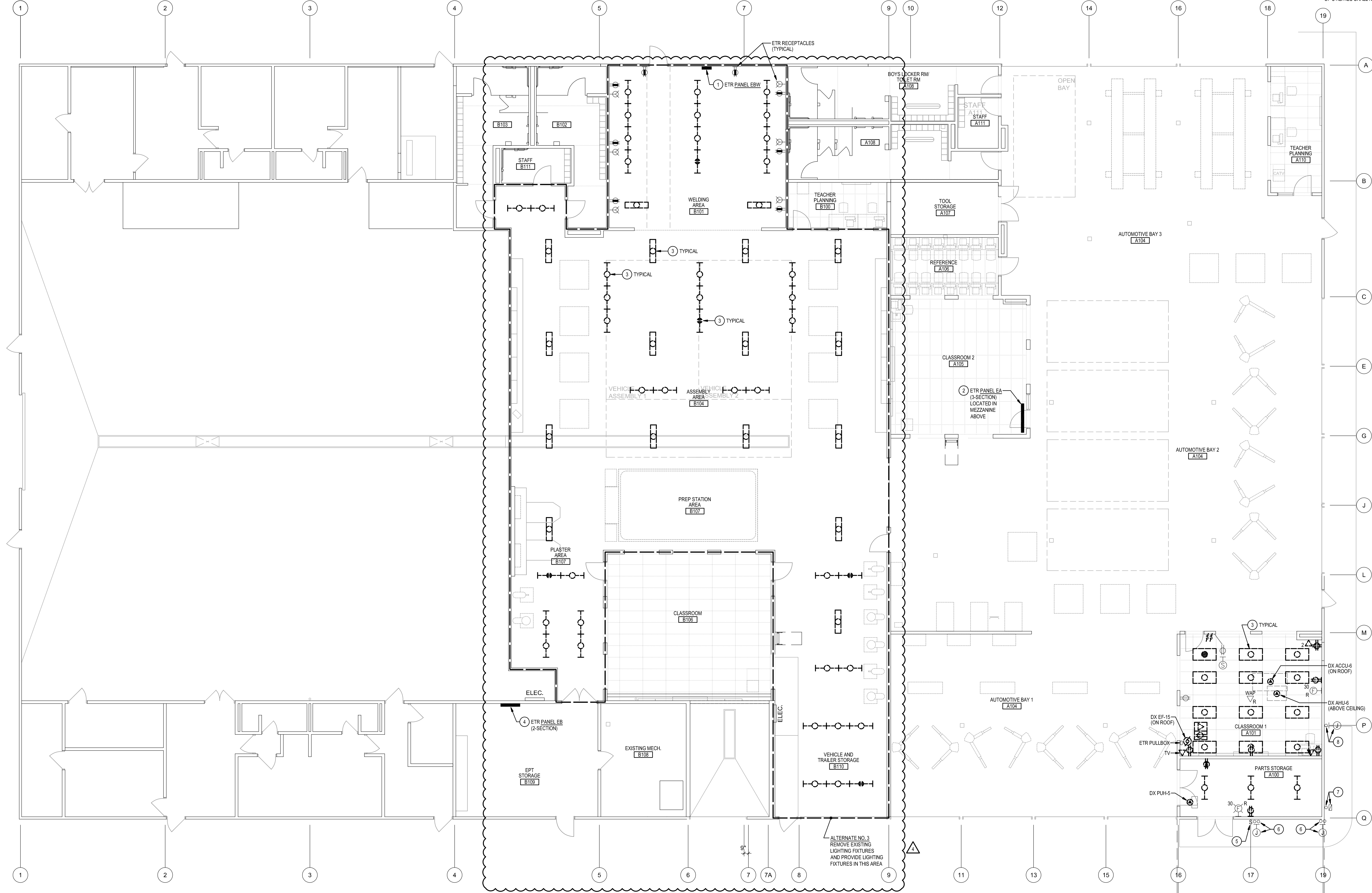
DATE 04/21/2023  
SCALE AS INDICATED

**SPECIFIC NOTES:**

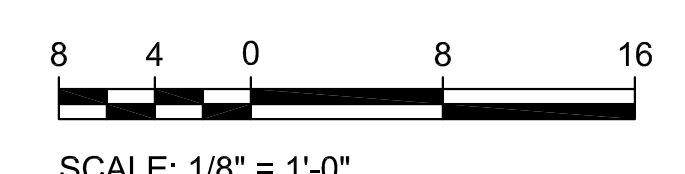
1. EXISTING TO REMAIN PANEL EBW IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 225A BUS, 42-POLE, WITH 225A MAIN CIRCUIT BREAKER AND SPACE PROVISIONS AT POLES 26, 28, 32, 34, 36, 38, 40, 41, AND 42.
2. EXISTING TO REMAIN PANEL EA IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 400A BUS, THREE SECTIONS, 42-POLES PER SECTION, WITH 400A MAIN CIRCUIT BREAKER AND 1P-20A SPARE CIRCUIT BREAKERS AND SIX SPACE PROVISIONS IN SECTION 2.
3. REMOVE EXISTING LIGHTING FIXTURE. EXISTING LIGHTING CIRCUIT SHALL REMAIN AND BE REUSED TO CONNECT TO LIGHTING FIXTURE SHOWN ON NEW FLOOR PLAN.
4. EXISTING TO REMAIN PANEL EB IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 400A BUS, TWO SECTIONS, 42-POLES PER SECTION, WITH 400A MAIN CIRCUIT BREAKER AND 3P-20A SPARE CIRCUIT BREAKERS IN SECTION 2.
5. CAREFULLY REMOVE AND REINSTALL EXISTING SURFACE-MOUNTED SWITCH, CONDUIT OUTLET BODY (CONDULET) ABOVE, AND ASSOCIATED WIRING IN EXPOSED 1/2" CONDUIT TO ACCOMMODATE REPLACEMENT OF EXTERIOR METAL FRAME WALL ASSEMBLY WITH MASONRY EXTERIOR WALL.
6. CAREFULLY REMOVE AND REINSTALL EXISTING SURFACE-MOUNTED OUTLET BOX AND WIRING IN TWO ASSOCIATED EXPOSED 3/4" CONDUITS RUN DOWN TO SLAB TO ACCOMMODATE REPLACEMENT OF EXTERIOR METAL FRAME WALL ASSEMBLY WITH MASONRY EXTERIOR WALL.
7. CAREFULLY REMOVE AND REINSTALL EXISTING SURFACE-MOUNTED PULLBOX, WIRING IN ASSOCIATED EXPOSED 3" CONDUIT RUN DOWN TO SLAB, AND WIRING IN ASSOCIATED 3" CONDUIT PENETRATING WALL FROM PULLBOX TO ACCOMMODATE REPLACEMENT OF EXTERIOR METAL FRAME WALL ASSEMBLY WITH MASONRY EXTERIOR WALL.
8. CAREFULLY REMOVE AND REINSTALL EXISTING SURFACE-MOUNTED OUTLET BOX AND WIRING IN ASSOCIATED EXPOSED 3/4" CONDUIT RUN DOWN TO SLAB TO ACCOMMODATE REPLACEMENT OF EXTERIOR METAL FRAME WALL ASSEMBLY WITH MASONRY EXTERIOR WALL.

**GENERAL NOTES:**

- A. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE EXISTING CONDITIONS IN DETAIL OR DIMENSION. DETERMINE EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
- B. WHERE EXISTING LIGHTING FIXTURES ARE NOTED TO BE REMOVED, EXISTING LIGHTING CIRCUIT SHALL REMAIN AND BE REUSED TO CONNECT TO LIGHTING FIXTURES SHOWN ON NEW WORK PLAN.
- C. WHERE EXISTING MECHANICAL EQUIPMENT IS NOTED TO BE DISCONNECTED, REMOVE ASSOCIATED WIRE AND CONDUIT BACK TO SOURCE.
- D. EXISTING CIRCUITS INTERRUPTED BY DEMOLITION, BUT ARE TO REMAIN, SHALL BE MADE CONTINUOUS.
- E. WHERE CIRCUITS ARE REMOVED BACK TO PANELS, ASSOCIATED BREAKERS SHALL REMAIN AND BECOME SPARE.
- F. WHERE DEVICES ARE TO BE REMOVED AND REINSTALLED, PROVIDE WIRE AND CONDUIT TO NEW LOCATION AS REQUIRED.
- G. IN BLOCK OR CONCRETE WALLS TO REMAIN, PROVIDE STAINLESS STEEL BLANK COVER PLATES FOR DEVICES REMOVED.
- H. DEMOLITION SHALL INCLUDE REMOVAL AND OFF-SITE DISPOSAL OF MATERIALS. DO NOT ABANDON IN PLACE ANY ELECTRICAL COMPONENTS UNLESS OTHERWISE NOTED ON DRAWINGS.
- I. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY DASHED (---) SHALL BE REMOVED AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (—) SHALL REMAIN.
- J. THE EXISTING FACILITY SHALL REMAIN IN OPERATION DURING RENOVATION. INTERRUPTION TO THE EXISTING BUILDING ELECTRIC SERVICE SHALL BE COORDINATED WITH THE OWNER TO MINIMIZE DISRUPTION. INTERRUPTION OF UTILITIES SHALL NOT OCCUR DURING SCHOOL WORKING HOURS.



**FIRST FLOOR PLAN  
ELECTRICAL - DEMOLITION**  
SCALE: 1/8"=1'-0"



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1	75% SUBMISSION	2/28/2023
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**MEP CONSULTANTS**  
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Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2024.

**PROJECT**  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

**DRAWING TITLE**  
FIRST FLOOR  
DEMOLITION PLAN - ELECTRICAL

SEAL	DRAWN P/JM	PROJECT # 23001.00
CHECKED P/JM	DRAWING #	
REVIEWED P/JM		
DATE 04/21/2023		
SCALE AS INDICATED		

**E1.01**



**SPECIFIC NOTES:**

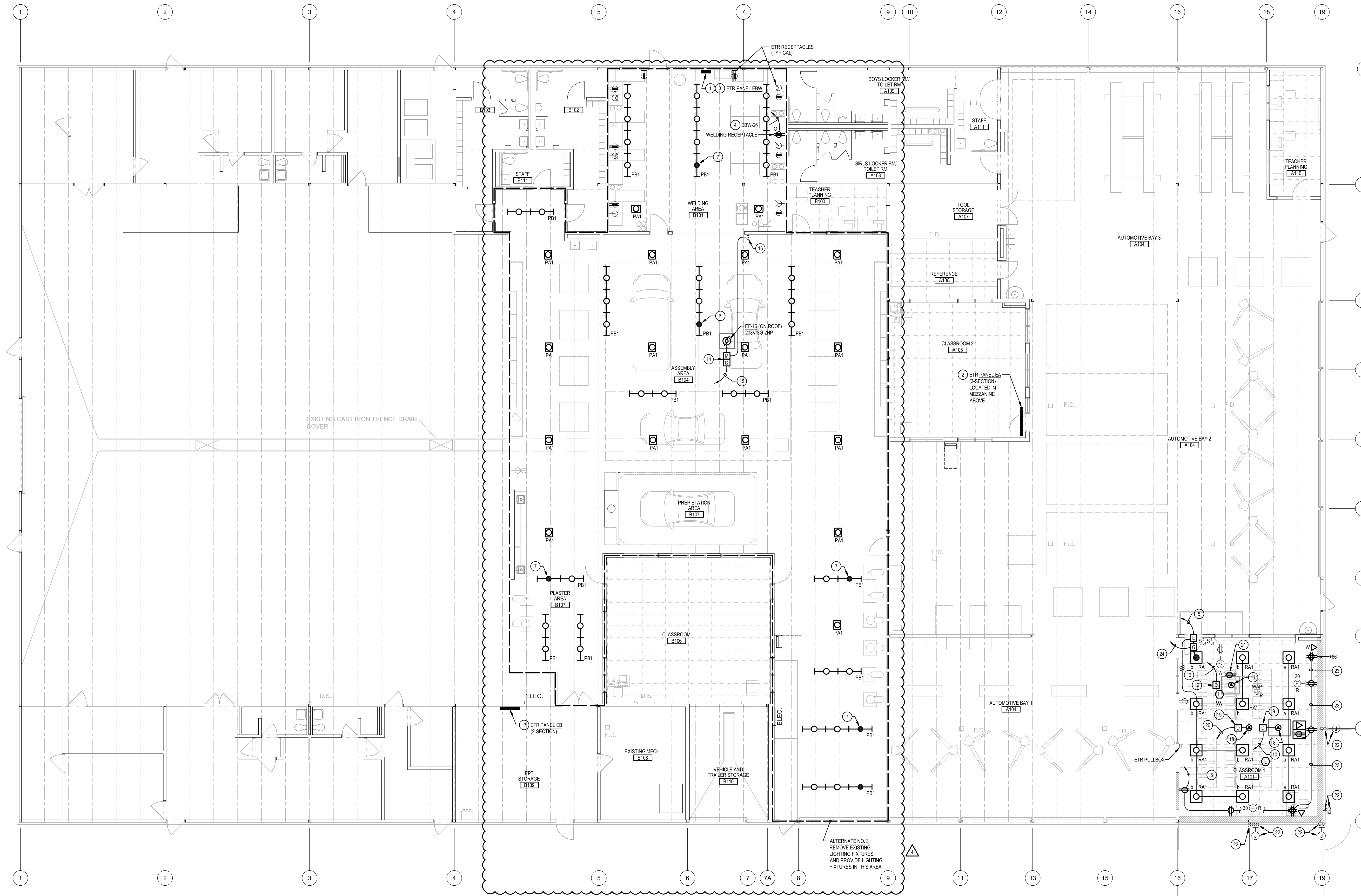
- 1 EXISTING TO REMAIN PANEL EBW IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 250A BUS, 42 POLE, WITH 250A MAIN CIRCUIT BREAKER AND SPACE PROVISIONS AT POLES 26, 28, 32, 34, 36, 38, 40, 41, AND 42.
- 2 EXISTING TO REMAIN PANEL EA IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 400A BUS, THREE SECTIONS, 42 POLES PER SECTION, WITH 400A MAIN CIRCUIT BREAKER AND 1P-20A SPARE CIRCUIT BREAKERS AND SIX SPACE PROVISIONS IN SECTION 2.
- 3 PROVIDE 1P-20A CIRCUIT BREAKER IN SPACE 26 OF EXISTING TO REMAIN PANEL EBW. CIRCUIT BREAKER SHALL MATCH EXISTING FOR TYPE AND AIC RATING.
- 4 PROVIDE 2 #12 + #12 GROUND IN 3/4" CONDUIT AND CONNECT TO 1P-20A CIRCUIT BREAKER IN PANEL EBW.
- 5 PROVIDE 2 #12 + #12 GROUND IN 3/4" CONDUIT AND CONNECT TO EXISTING LIGHTING CIRCUIT PREVIOUSLY SERVING CLASSROOM.
- 6 PROVIDE 2 #8 + #8 GROUND IN 3/4" CONDUIT AND CONNECT TO 1P-20A SPARE CIRCUIT BREAKER IN EXISTING TO REMAIN PANEL EA.
- 7 CONNECT LIGHTING FIXTURE AS NOTED TO EXISTING TO REMAIN UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
- 8 FAN COOL UNIT FDU33 (ABOVE CEILING) 200V/1Ø/3Ø/250A/2P
- 9 PROVIDE 2P-30A-240V ENCLOSED SWITCH IN NEMA TYPE 1 ENCLOSURE. MOUNT NEAR FAN COOL UNIT IN ACCESSIBLE CEILING SPACE. MAINTAIN WORKING CLEARANCE AROUND FAN COOL UNIT.
- 10 PROVIDE 2 #8 + #8 GROUND IN 3/4" CONDUIT TO SECTION 2 OF ETR PANEL EA. PROVIDE 1P-20A CIRCUIT BREAKER IN SPACE OF PANEL EA. CIRCUIT BREAKER SHALL MATCH EXISTING FOR TYPE AND AIC RATING. BRANCH CIRCUIT IS SIZED FOR VOLTAGE DROP.

- 11 AIR-COOLED CONDENSING UNIT ACCU-6 (ON ROOF) 200V/1Ø/3Ø/250A/2P
- 12 PROVIDE 2P-60A-240V ENCLOSED SWITCH IN NEMA TYPE 4X STAINLESS STEEL ENCLOSURE. MOUNT ON ROOF ADJACENT TO UNIT. PROVIDE STEEL PIPE SUPPORTS AS REQUIRED FOR MOUNTING.
- 13 PROVIDE 2 #8 + #10 GROUND IN 3/4" CONDUIT TO SECTION 2 OF ETR PANEL EA. PROVIDE 2P-60A CIRCUIT BREAKER IN SPACE OF PANEL EA. CIRCUIT BREAKER SHALL MATCH EXISTING FOR TYPE AND AIC RATING.
- 14 PROVIDE COMBINATION STARTER IN NEMA TYPE 4X STAINLESS STEEL ENCLOSURE, WITH 3P-30A-240V NON-FUSED DISCONNECT AND NEMA SIZE 0 STARTER. MOUNT ON ROOF ADJACENT TO EXHAUST FAN. PROVIDE STEEL PIPE SUPPORTS AS REQUIRED FOR MOUNTING.
- 15 PROVIDE 3 #10 + #10 GROUND IN 3/4" CONDUIT TO ETR PANEL EB AND CONNECT TO 3P-20A SPARE CIRCUIT BREAKER (CIRCUIT EB-44-46-48) IN PANEL EB.
- 16 PROVIDE LINE-VOLTAGE TOGGLE SWITCH IN OUTLET BOX SURFACE MOUNTED AT 4" ABOVE FLOOR TO TOP OF BOX. LABEL SWITCH "ASSEMBLY AREA EXHAUST FAN". PROVIDE 2 #12 + #12 GROUND IN 3/4" CONDUIT FROM SWITCH TO COMBINATION STARTER FOR LF-3 AND CONNECT TO AUTOMATIC WASTE OF HAND-OFF-AUTOMATIC SWITCH OF COMBINATION STARTER.
- 17 EXISTING TO REMAIN PANEL EB IS BY GENERAL ELECTRIC, A SERIES II PANELBOARD, RATED AT 120/208 VOLTS, 3Ø, 4-WIRE, 400A BUS, TWO SECTIONS, 42 POLES PER SECTION, WITH 400A MAIN CIRCUIT BREAKER AND 3P-20A SPARE CIRCUIT BREAKERS IN SECTION 2.

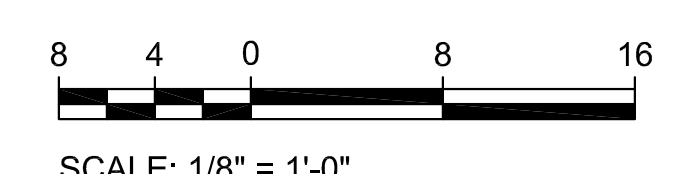
- 18 DUCT HEATING COIL 200V/1Ø/3Ø/250A/2P
- 19 PROVIDE 2P-60A-240V ENCLOSED SWITCH IN NEMA TYPE 1 ENCLOSURE. MOUNT NEAR DUCT HEATING COIL IN ACCESSIBLE CEILING SPACE. MAINTAIN WORKING CLEARANCE AROUND DUCT HEATING COIL.
- 20 PROVIDE 2 #8 + #10 GROUND IN 3/4" CONDUIT TO SECTION 2 OF ETR PANEL EA. PROVIDE 2P-60A CIRCUIT BREAKER IN SPACE OF PANEL EA. CIRCUIT BREAKER SHALL MATCH EXISTING FOR TYPE AND AIC RATING.
- 21 MOUNT WEATHER-RESISTANT GFCI RECEPTACLE WITH WILEN-PLUSE COVER ON ROOF ADJACENT TO ACCU-6. PROVIDE PIPE STEEL SUPPORTS AS REQUIRED FOR MOUNTING. REFER TO DETAIL 3E2.01. PROVIDE 2 #10 + #10 GROUND IN 3/4" CONDUIT AND CONNECT TO 1P-20A CIRCUIT BREAKER IN PANEL EA.
- 22 UPON INSTALLATION OF MASONRY EXTERIOR WALL, REINSTALL EXISTING PULL BOX, SWITCH, OUTLET BOXES, AND ASSOCIATED WIRING IN CONDUITS. MAKE CONNECTIONS TO EXISTING WIRING AND CONDUITS AS REQUIRED. COORDINATE CONDUIT CONNECTIONS AT SLAB WITH MASONRY EXTERIOR WALL INSTALLATION. REFER TO DRAWING E1.01 FOR ADDITIONAL INFORMATION.
- 23 RUN SURFACE METAL RACEWAY HORIZONTALLY ON WALL BELOW MARKERBOARD TRACKBOARD.
- 24 PROVIDE 2 #12 + #12 GROUND IN 3/4" CONDUIT AND CONNECT TO EXISTING EMERGENCY LIGHTING CIRCUIT PREVIOUSLY SERVING CLASSROOM.

**GENERAL NOTES:**

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- B. CONNECT LIGHTING FIXTURES TO EXISTING TO REMAIN LIGHTING CIRCUITS. PROVIDE 2 #12 + #12 GROUND IN FLEXIBLE METAL CONDUIT WHERE REQUIRED AND MAKE CONNECTIONS FOR COMPLETE INSTALLATION.



**FIRST FLOOR PLAN**  
ELECTRICAL - NEW WORK  
SCALE: 1/8"=1'-0"



NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2024.

**PROJECT**  
Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

**DRAWING TITLE**  
FIRST FLOOR  
NEW WORK PLAN - ELECTRICAL

	DRAWN	PJM	PROJECT #	23001.00
	CHECKED	PJM	DRAWING #	
	REVIEWED	PJM		
	DATE	04/21/2023		
	SCALE	AS INDICATED		

**E2.01**

**ELECTRICAL SPECIFICATIONS**

**01 1100 - GENERAL REQUIREMENTS**

- A. THE WORK INCLUDES FURNISHING OF LABOR, EQUIPMENT, AND MATERIALS, AND THE PERFORMANCE OF OPERATIONS PERTINENT TO THE WORK DESCRIBED.
- B. OBTAIN AND PAY FOR PERMITS, FEES AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.
- C. MATERIALS AND EQUIPMENT SHALL BE NEW.
- D. THE WORK AND EQUIPMENT PROVIDED SHALL BE FULLY WARRANTED UNDER THE GENERAL PROJECT WARRANTY. DURING THE CORRECTION PERIOD, CORRECT ANY WORK FOUND TO BE NOT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, BY PROMPTLY REPAIRING OR COMPLETELY REPLACING WORK REQUIRING CORRECTION AT NO ADDITION TO THE CONTRACT SUM. EXCEPT AS OTHERWISE REQUIRED IN GENERAL CONDITIONS, THE CORRECTION PERIOD IS TWO YEARS AFTER THE DATE OF SUBSTANTIAL COMPLETION.
- E. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS, OR MODEL NAME OR CATALOG REFERENCE NUMBER, ESTABLISH A STANDARD OF QUALITY, OPTIONS TO BE INCLUDED, AND PERFORMANCE.
  - 1. WHERE OTHER ACCEPTABLE MANUFACTURERS ARE NAMED, CONTRACTOR MAY PROVIDE PRODUCTS OF THOSE NAMED MANUFACTURERS ONLY, WHICH MEET THE SPECIFICATIONS.
  - 2. WHERE SPECIFICATION PERMITS "EQUAL" PRODUCTS, WITHOUT NAMING OTHER ACCEPTABLE MANUFACTURERS, CONTRACTOR MAY USE PRODUCTS OF ANY MANUFACTURER, WHICH MEET THE SPECIFICATIONS.
- G. TEMPORARY STORAGE: MAINTAIN UPON PREMISES, WHERE DIRECTED, A STORAGE AREA, AND BE RESPONSIBLE FOR CONTENTS WITHIN THIS AREA.
- H. PROTECTION: CONTROL DUST RESULTING FROM CONSTRUCTION WORK TO PREVENT ITS SPREAD BEYOND THE IMMEDIATE WORK AREA, AND TO AVOID CREATION OF A NUISANCE. PREVENT DAMAGE AND SOILING OF WORK. REPAIR DAMAGE OR SOILING OR REPLACE MATERIALS OR WORK DAMAGED, AT NO ADDITION TO THE CONTRACT SUM.
- I. PROMPTLY NOTIFY THE ARCHITECT IF MATERIALS SUSPECTED OF CONTAINING SOME HAZARD ARE ENCOUNTERED. DO NOT PERFORM ANY WORK THAT COULD DISTURB THE SUSPECTED MATERIAL UNTIL WRITTEN INSTRUCTIONS HAVE BEEN RECEIVED.
- J. EQUIPMENT, CONSTRUCTION AND INSTALLATION SHALL MEET REQUIREMENTS OF LOCAL, STATE AND FEDERAL GOVERNING CODES.
- K. SUBMIT SHOP DRAWINGS AND/OR PRODUCT DATA FOR EACH ITEM OF EQUIPMENT OR MATERIAL TO BE USED.
- L. SUBMIT REQUIRED CERTIFICATES OF APPROVAL FROM APPROVED INSPECTION AGENCIES AND AUTHORITIES HAVING JURISDICTION. CERTIFICATES OF APPROVAL SHALL BE RECEIVED BY THE ARCHITECT PRIOR TO FINAL ACCEPTANCE OF THE WORK.
- M. SUBMIT PROJECT RECORD DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
  - 1. ONE SET OF CONTRACT DOCUMENTS NEATLY MARKED IN RED INK TO RECORD ACTUAL REVISIONS TO THE WORK AS CONSTRUCTED.
  - 2. OPERATING INSTRUCTIONS MOUNTED IN PLASTIC COVERS FOR POSTING.
  - 3. OPERATION AND MAINTENANCE DATA, INCLUDING:
    - a. SIGNIFICANT DESIGN CRITERIA SUCH AS FAN CURVES.
    - b. LIST OF EQUIPMENT, INCLUDING WEIGHTS.
    - c. PARTS LISTS AND RECOMMENDED SPARE PARTS LISTS.
    - d. OPERATING INSTRUCTIONS.
    - e. MAINTENANCE INSTRUCTIONS.
    - f. SHOP DRAWINGS AND PRODUCT DATA.
    - g. CERTIFICATES, WARRANTIES, AND GUARANTEES.
    - h. TEST REPORTS.
- N. WELDING, BRAZING, AND SOLDERING PROCEDURES AND OPERATOR QUALIFICATIONS FOR BUILDING SYSTEMS PIPING SHALL COMPLY WITH AWS D10.9, ASME B31.9 BUILDING SERVICES PIPING, COPPER DEVELOPMENT ASSOCIATION "COPPER TUBE HANDBOOK", AND SAFE DRINKING WATER ACT.

**02 5000 - TRENCHING, BACKFILLING, AND COMPACTING**

- A. INCLUDE EXCAVATING, TRENCHING, SHEETING, SHORING, BACKFILLING, AND COMPACTING REQUIRED FOR THE PROPER INSTALLATION OF WORK.
- B. PROTECT EXISTING UTILITIES FROM DAMAGE DURING THE EXCAVATION AND BACKFILLING. REPAIR NEW AND EXISTING WORK, IF DAMAGED, AT NO ADDITION TO THE CONTRACT SUM.
- C. PROVIDE TEMPORARY WALKWAYS OVER TRENCHES WITH RAILINGS AND OTHER SAFEGUARDS, INCLUDING AMBER BLINKER LAMPS OR OTHER WARNINGS FOR NIGHT USE.
- D. FURNISH AND MAINTAIN PUMPS, FLUMES, GUTTERS, AND APPURTENANCES TO KEEP THE EXCAVATIONS FREE FROM WATER DURING THE WORK. WATER SHALL BE DIRECTED TO A POINT REMOTE FROM BUILDING OPERATIONS, APPROVED BY THE ARCHITECT.
- E. BACKFILL IN SIX-INCH LAYERS, EACH COMPACTED TO 90 PERCENT DENSITY.

**03 0000 - CUTTING AND PATCHING**

- A. CUT WALLS, FLOORS, PARTITIONS, ROOFS, AND OTHER APPURTENANCES FOR THE PASSAGE OR ACCOMMODATION OF CONDUITS. CLOSE SUPERFLUOUS OPENINGS AND REMOVE DEBRIS CAUSED BY WORK OF THIS DIVISION.
- B. NO CUTTING OF ANY STRUCTURE OR FINISH SHALL BE DONE UNTIL THE CONDITION REQUIRING SUCH CUTTING HAS BEEN EXAMINED AND APPROVED BY THE ARCHITECT.
- C. NEW OR EXISTING SURFACES DISTURBED AS A RESULT OF SUCH CUTTING OR OTHERWISE DAMAGED SHALL BE RESTORED TO MATCH ORIGINAL WORK AND MATERIALS USED FOR ANY PATCHING OR MENDING SHALL CONFORM TO THE CLASS OF MATERIALS ORIGINALLY INSTALLED.
- D. REFINISH SURFACES TO MATCH ADJACENT FINISH. FOR CONTINUOUS SURFACES, REFINISH TO NEAREST INTERSECTION OR NATURAL BREAK. FOR AN ASSEMBLY, REFINISH ENTIRE UNIT.

**07 8000 - FIRESTOPPING**

- A. SUBMIT DESCRIPTIONS (PRODUCT DATA) OF FIRESTOP OR SMOKESTOP ASSEMBLIES AND DEVICES FOR EVERY TYPE OF OPENING AND THROUGH PENETRATION IN FLOORS AND FIRE- OR SMOKE-RATED PARTITIONS.
- B. ACCEPTABLE MANUFACTURERS AND PRODUCTS: LISTED BY UL OR WARNOCK HERSEY FOR THE SYSTEMS PROPOSED. WHERE UL OR WARNOCK HERSEY LISTING IS NOT AVAILABLE, OBTAIN WRITTEN ACCEPTANCE OF ASSEMBLY OR MATERIAL BY AUTHORITIES HAVING JURISDICTION.
- C. PROVIDE SYSTEMS OR DEVICES CONFORMING TO THE CONSTRUCTION TYPE, PENETRANT TYPE, ANNUAL SPACE REQUIREMENTS AND FIRE RATING INVOLVED IN EACH SEPARATE INSTANCE. SYSTEMS SHALL BE SYMMETRICAL FOR WALL APPLICATIONS.
  - 1. PROVIDE FOR EVERY OPENING AND THROUGH PENETRATION IN FLOORS AND FIRE- OR SMOKE-RATED PARTITIONS.
- D. INSTALL IN ACCORDANCE WITH TESTING AND INSPECTION AGENCY'S AND MANUFACTURER'S INSTRUCTIONS.
- E. KEEP AREAS OF WORK ACCESSIBLE UNTIL INSPECTION AND ACCEPTANCE BY AUTHORITIES HAVING JURISDICTION.
- F. BEFORE SUBSTANTIAL COMPLETION, PATCH AND REPAIR FIRESTOPPING CUT OR PENETRATED BY OTHER CONSTRUCTION WORK.

**26 0000 - ELECTRICAL**

- A. PROVIDE ELECTRICAL SYSTEMS, MATERIALS, AND EQUIPMENT AS SPECIFIED AND INDICATED ON THE DRAWINGS.
- 26 0055 - DEMOLITION
  - A. DEMOLITION REQUIREMENTS
    - 1. LOCATE, IDENTIFY, AND PROTECT MECHANICAL AND ELECTRICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS.
    - 2. COORDINATE REQUIRED OUTAGES OF SERVICES WITH THE OWNER.
    - 3. PERFORM REMOVAL OF WORK NEATLY WITH THE LEAST POSSIBLE DISTURBANCE TO THE BUILDING AND OCCUPANTS.
    - 4. REMOVE DEMOLITION DEBRIS FROM THE WORK AREA AND CLEAN THE WORK AREA ON A DAILY BASIS.
    - 5. PROVIDE TEMPORARY BARRIERS, DANGER SIGNALS, AND APPURTENANCES REQUIRED FOR PROTECTION OF USERS AND PERSONNEL.
    - 6. DISCONNECT, DEMOUNT, DEMOLISH, AND REMOVE INACTIVE AND OBSOLETE CONDUIT, WIRING, EQUIPMENT, AND DEVICES.
    - 7. REMOVE ANCHORS, BOLTS, AND FASTENERS ASSOCIATED WITH REMOVED ELECTRICAL ITEMS.
    - 8. CONDUITS EMBEDDED IN FLOORS, AND MASONRY WALLS MAY BE ABANDONED IN PLACE IF THEY DO NOT INTERFERE WITH NEW INSTALLATIONS. CUT MATERIALS BACK TO AT LEAST ONE INCH WITHIN FINISHED SURFACE. CAP CONDUITS ABANDONED BEHIND FINISHED SURFACES.
    - 9. PATCH AND REPAIR SURFACES DAMAGED DURING DEMOLITION WORK WITH MATERIALS AND FINISHES THAT MATCH EXISTING ADJACENT SURFACES.

**26 0500 - BASIC ELECTRICAL MATERIALS AND METHODS**

- A. DESIGN REQUIREMENTS
  - 1. PROPOSED PRODUCTS SHALL COMPLY WITH CHARACTERISTICS OF THE BASIS-OF-DESIGN PRODUCT, INCLUDING RATINGS, DIMENSIONS, AND OTHER CHARACTERISTICS RELATED TO FUNCTIONAL FIT, ACCESS, OR CONNECTIVITY.
  - 2. THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC, AND DO NOT INDICATE ALL FITTINGS OR OFFSETS IN CONDUIT, OR ALL JUNCTION AND PULL BOXES, ACCESS PANELS, OR OTHER SPECIALTIES REQUIRED.
    - a. INSTALL CONDUIT EXPOSED TO VIEW PARALLEL WITH THE LINES OF THE BUILDING AND AS CLOSE TO WALLS, COLUMNS, AND CEILINGS AS MAY BE PRACTICAL, MAINTAINING ADEQUATE CLEARANCE FOR ACCESS AT PARTS REQUIRING SERVICING.
    - b. INSTALL CONDUIT A SUFFICIENT DISTANCE FROM OTHER WORK TO PERMIT A CLEARANCE OF NOT LESS THAN 0.5 INCH BETWEEN ITS FINISHED COVERING AND ADJACENT WORK.
    - c. NO CONDUIT SHALL CROSS BELOW THE HEAD OF A WINDOW OR DOOR.
    - d. PULL BOXES AND OTHER APPURTENANCES, WHICH REQUIRE OPERATION OR MAINTENANCE, SHALL BE EASILY ACCESSIBLE. DO NOT CUT OR FORM HANDHOLES FOR OPERATION OR MAINTENANCE OF PLUG-IN OR HARDWIRED DEVICES THROUGH WALLS OR CEILINGS.
- B. GROUNDING AND BONDING
  - 1. GROUND CONDUCTOR, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE COPPER, 98 PERCENT CONDUCTIVITY, SOLID FOR NO. 10 AND SMALLER AND STRANDED FOR NO. 8 AND LARGER.
  - 2. MECHANICAL TYPE GROUND CONNECTORS: IEEE 837 AND UL 467, EQUAL TO FCI BURNDY G SERIES, LISTED FOR USE FOR SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND CONNECTED ITEMS.
  - 3. EXOTHERMIC TYPE GROUND CONNECTIONS: EXOTHERMIC WELDING SYSTEMS SHALL BE EQUAL TO "CADWELD," MANUFACTURED BY ERICO INTERNATIONAL CORPORATION.
  - 4. PROVIDE THE COMPLETE GROUNDING OF CONDUIT SYSTEMS, ELECTRICAL EQUIPMENT, CONDUCTOR AND EQUIPMENT ENCLOSURES, MOTORS, AND NEUTRAL CONDUCTORS IN ACCORDANCE WITH APPLICABLE CODES. GROUNDED PHASE AND NEUTRAL CONDUCTORS SHALL BE CONTINUOUSLY IDENTIFIED. CONTINUITY OF METAL RACEWAYS SHALL BE INSURED BY DOUBLE LOCKNUTS.
  - 5. GROUND SYSTEM CONNECTIONS, WHICH ARE BENEATH THE FLOOR AND IN A CONCEALED OR INACCESSIBLE LOCATION, SHALL BE BRAZED OR WELDED. BRAZING AND WELDING SHALL BE "CADWELD."
  - 6. EQUIPMENT GROUNDING: PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH FEEDERS AND BRANCH CIRCUITS.
  - 7. GROUNDING SYSTEM TEST: DURING CONSTRUCTION, THE GROUNDING SYSTEM IS CONTINUOUS AND THAT RESISTANCE TO GROUND IS NOT MORE THAN 10 OHMS.

**26 1000 - WIRING METHODS**

- A. WIRES AND CABLES
  - 1. CONDUCTORS: UL LISTED AND NEMA WC 70 COMPLIANT; COPPER, 98 PERCENT CONDUCTIVITY, SUITABLE FOR 600-VOLT DUTY; RATED 90-DEGREE CELSIUS TEMPERATURE FOR WET/DRY APPLICATIONS; THHN/THWN-2 INSULATION, SOLID FOR NO. 10 AND SMALLER COMPLYING WITH ASTM B 3, AND STRANDED FOR NO. 8 AND LARGER COMPLYING WITH ASTM B 8.
  - 2. PROVIDE WIRE AND CABLE INDICATED IN ACCORDANCE WITH NATIONAL, STATE, AND LOCAL ELECTRICAL CODES.
  - 3. SPLICING SHALL BE DONE IN OUTLET BOXES AND JUNCTION BOXES AND NOT IN CONDUIT.
  - 4. WIRING IN HIGH AMBIENT TEMPERATURE AREAS SHALL BE OF TYPES REQUIRED BY NFPA 70.
- B. CONDUITS
  - 1. INTERMEDIATE STEEL CONDUIT (IMC) WITH FULL THREADED HUB FITTINGS: UL 1242 AND ANSI C80.6.
  - 2. ELECTRICAL METALLIC TUBING (EMT) WITH CONCRETE- OR RAIN-TIGHT, COMPRESSION OR SET SCREW TYPE COUPLINGS: UL 797 AND ANSI C80.3.
  - 3. FLEXIBLE METAL CONDUIT (FMC) WITH NYLON INSULATED THROAT CONNECTORS: UL 1.
  - 4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC) AND CONNECTORS: UL 360.
  - 5. WIREWAYS: EQUAL TO SQUARE D "SQUARE-DUCT."
  - 6. WEATHERPROOF EXPANSION FITTINGS: WITH BONDING JUMPERS, EQUAL TO O-Z/GEDNEY TYPES AX AND TX.
  - 7. PROVIDE COMPLETE, SEPARATE AND INDEPENDENT RACEWAY SYSTEM FOR EACH OF THE VARIOUS WIRING SYSTEMS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
    - a. LIGHTING
    - b. POWER
    - c. EXIT AND EMERGENCY LIGHTING SYSTEM
    - d. FIRE ALARM SYSTEM
    - e. CONTROL WIRING
    - f. VOICE AND DATA SYSTEMS
    - g. SOUND SYSTEM
    - h. SECURITY SYSTEMS

- 8. WIRE RACEWAY SYSTEMS COMPLETELY, EXCEPT WHERE OTHERWISE INDICATED, AS SHOWN ON DRAWINGS AND AS REQUIRED FOR SATISFACTORY OPERATION OF EACH SYSTEM.
- 9. TYPES AND LOCATIONS OF CONDUITS:
  - a. IMC WITH SCREW JOINT COUPLINGS: WIRING TO EXTERIOR EQUIPMENT AND CONDUITS INSTALLED BELOW 24" ABOVE FLOOR.
  - b. EMT: SIZES 4 INCHES AND SMALLER, EXCEPT AS NOTED ABOVE.
- 10. WHERE CONDUIT IS CONNECTED TO A CABINET, JUNCTION BOX, PULL BOX, OR AUXILIARY GUTTER, PROTECT THE CONDUCTORS WITH AN INSULATING BUSHING. PROVIDE LOCKNUTS BOTH INSIDE AND OUTSIDE THE ENCLOSURE. WHERE CONDUIT IS STUBBED UP TO ABOVE CEILINGS FOR FUTURE WIRING, CLOSE ENDS WITH BUSHINGS.
- 11. SIZES:
  - a. DO NOT USE CONDUIT SMALLER THAN 0.75 INCHES.
  - b. FEEDER CONDUITS SHALL BE AS LARGE AS INDICATED, OR AS REQUIRED BY NFPA 70 (WHICHEVER IS LARGER). DO NOT INSTALL MORE THAN ONE FEEDER IN A SINGLE CONDUIT.
  - c. CONDUIT SIZES SHOWN ON DRAWINGS ARE BASED ON TYPE THHN/THWN-2 WIRE.
- 12. GROUND CONDUITS AS REQUIRED BY NFPA 70.
- 13. WHERE CONDUITS PASS THROUGH BUILDING EXPANSION JOINTS, AND WHEREVER RELATIVE MOVEMENT COULD OCCUR BETWEEN ADJACENT SLABS, EQUIP WITH WEATHERPROOF EXPANSION FITTINGS AND BONDING JUMPERS.
- 14. RUN CONDUITS CONCEALED IN NEW CONSTRUCTION EXCEPT WHERE CONNECTING TO SURFACE-MOUNTED CABINETS AND EQUIPMENT. CONDUITS SHALL BE EXPOSED IN ELECTRICAL AND MECHANICAL EQUIPMENT SPACES. INSTALL CONDUIT ABOVE SUSPENDED CEILINGS AND WITHIN WALLS AND PARTITIONS.
- 15. PROVIDE CONDUIT SUPPORTS, HANGERS, CHANNELS, BEAM CLAMPS, AND APPURTENANCES REQUIRED FOR THE WORK.
- 16. FLEXIBLE CONDUIT:
  - a. INSTALLATION SHALL COMPLY WITH NFPA 70.
  - b. MINIMUM LENGTH: TWO FEET.
  - c. MAXIMUM LENGTH: SIX FEET.
  - d. MAKE IMMEDIATE CONNECTIONS TO RECESSED LIGHTING FIXTURES AND OTHER EQUIPMENT IN SUSPENDED CEILINGS WITH FLEXIBLE METAL CONDUIT. INCLUDE SUFFICIENT SLACK TO PERMIT REMOVAL OF FIXTURE OR EQUIPMENT.
  - e. MAKE IMMEDIATE CONNECTIONS TO MOTORS WITH LIQUIDTIGHT FLEXIBLE CONDUIT. INCLUDE SUFFICIENT SLACK TO REDUCE THE EFFECTS OF VIBRATION.
  - f. IN WET LOCATIONS, PROVIDE LIQUIDTIGHT TYPE, IN SUCH A MANNER THAT LIQUIDS TEND TO RUN OFF THE SURFACE AND NOT DRAIN TOWARD THE FITTINGS.
  - g. WHERE FITTINGS ARE BROUGHT INTO AN ENCLOSURE WITH A KNOCKOUT, PROVIDE A GASKET ASSEMBLY CONSISTING OF AN O-RING AND RETAINER ON THE OUTSIDE.

**C. BOXES**

- 1. OUTLET, SWITCH, AND JUNCTION BOXES: SHERARDIZED OR GALVANIZED STAMPED; CAST-STEEL OR CAST-ALUMINUM WHERE REQUIRED FOR WEATHER-EXPOSED LOCATIONS.
- 2. JUNCTION AND PULL BOXES IN FEEDER CONDUIT RUNS: GALVANIZED, OF SIZE REQUIRED FOR CONDUIT ARRANGEMENT AND NOT LESS THAN THE SIZE REQUIRED BY NFPA 70, AND FURNISHED WITH SCREWED COVERS.
- 3. PROVIDE BOX AT EACH OUTLET, SWITCH, AND APPURTENANCE. EACH BOX SHALL BE OF A TYPE SUITABLE FOR THE DUTY INTENDED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - a. WHERE CONDUIT IS WEATHER-EXPOSED, PROVIDE CAST-STEEL OR -ALUMINUM BOXES.
- 4. BOXES IN METAL STUD WALLS OR PARTITIONS SHALL BE SECURELY SUPPORTED BY METAL CHANNELS SPANNING BETWEEN TWO STUDS AND ATTACHED TO SAME.
- 5. OUTLET BOXES USED FOR SUPPORTING LIGHTING FIXTURES: PROVIDE WITH MALLEABLE IRON FIXTURE STUDS OF "NO-BOLT" TYPE, SECURED BY LOCKNUT. PROVIDE STRUCTURAL CHANNEL SUPPORTS FOR BOXES OCCURRING IN CEILINGS. OUTLETS IN CEILINGS DIRECTLY ON BOTTOM OF JOISTS SHALL BE SUPPORTED INDEPENDENT OF CEILING CONSTRUCTION. OUTLETS IN SUSPENDED CEILINGS SHALL NOT BE SUPPORTED FROM CEILING CONSTRUCTION. SPECIAL SUPPORTS FOR BOXES SHALL BE AS DIRECTED AND APPROVED BY THE ARCHITECT.
- 6. BOXES SHALL BE PROVIDED WITH APPROPRIATE COVERS.

**D. SURFACE RACEWAY**


- 1. ONE-PIECE TYPE, GALVANIZED STEEL, EQUAL TO WIREMOLD 700 SERIES, EXCEPT WHERE INDICATED ON DRAWINGS TO BE TWO-PIECE, SINGLE-CHANNEL OR TWO-CHANNEL TYPE, GALVANIZED STEEL, WIREMOLD 2000, 2400, OR 4000 SERIES, AS REQUIRED.
- 2. FINISH: FIELD PAINTABLE BAKED ENAMEL, IVORY.
- 3. PROVIDE SURFACE METAL RACEWAY IN CLASSROOMS WHERE IT IS NECESSARY TO RUN EXPOSED.
- 4. INSTALL EACH ASSEMBLY AS RECOMMENDED BY THE MANUFACTURER.
  - a. WHERE FIELD CUTTING IS REQUIRED, MAKE EACH CUT WITH THE MANUFACTURER'S TOOL SPECIFICALLY DESIGNED FOR CUTTING THE PART AND MODEL.
- 5. ATTACH RACEWAY AND BOXES TO WALLS AND CEILINGS WITH FASTENERS AS SPECIFIED FOR CONDUITS. ATTACH EACH OUTLET BOX WITH AT LEAST TWO SCREWS. SECURE ONE-PIECE RACEWAYS AT NO LESS THAN EVERY FOUR FEET WITH TWO-HOLE STRAPS.

**E. WIRING DEVICES**

- 1. ACCEPTABLE MANUFACTURERS: ARROW HART/EATON WIRING DEVICES; HUBBELL/BRYANT ELECTRIC; LEGRAND/PASS & SEYMOUR (P&S); LEVITON MANUFACTURING CO.
  - 2. SWITCHES: EQUAL TO PASS & SEYMOUR PS20AC1 (SINGLE POLE).
  - 3. RECEPTACLES: EQUAL TO PASS & SEYMOUR TR5362 (NEMA 5-20R, TAMPER-RESISTANT), 2097TR (NEMA 5-20R, GFCL, TAMPER-RESISTANT), AND 2097TRWR (NEMA 5-20R, GFCL, TAMPER-RESISTANT, WEATHER-RESISTANT, WITH P&S WIUC10FRED WHILE-IN-USE WEATHERPROOF COVER).
  - 4. DEVICE COLOR: BROWN.
  - 5. DEVICE PLATES: EQUAL TO PASS & SEYMOUR, TYPE 302 STAINLESS STEEL, SS SERIES.
  - 6. INSTALL DEVICES IN COMPLETE COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  - 7. GROUP ADJACENT DEVICES UNDER SINGLE MULTI-GANG WALL PLATE.
- F. ENCLOSED CIRCUIT PROTECTIVE DEVICES**
- 1. ENCLOSED SWITCHES (DISCONNECTS/SAFETY SWITCHES)
    - a. MANUFACTURERS: EQUAL TO EATON, SCHNEIDER ELECTRIC (SQUARE D), OR SIEMENS.
    - b. PROPERLY SIZE SWITCHES FOR NUMBER OF POLES AND PROVIDE FUSED OR NON-FUSED AS REQUIRED FOR PROJECT CONDITIONS AND TO MEET NFPA 70 REQUIREMENTS.
    - c. SWITCHES SHALL BE LOCKABLE IN EITHER OPEN OR CLOSED POSITION.
    - d. NON-FUSED AND FUSED SWITCHES: HEAVY-DUTY TYPE.
    - e. PROVIDE ENCLOSED SWITCHES WHERE INDICATED AND AS REQUIRED BY NFPA 70 FOR MOTOR OUTLETS OR OTHER EQUIPMENT.
    - f. ENCLOSED SWITCHES SHALL BE FUSED WHERE INDICATED ON DRAWINGS.


NO	REVISION / SUBMISSION	DATE
1	75% SUBMISSION	2/28/2023
2	100% CONSTRUCTION DOCUMENTS	3/28/2023
3	BID DOCUMENTS	4/21/2023
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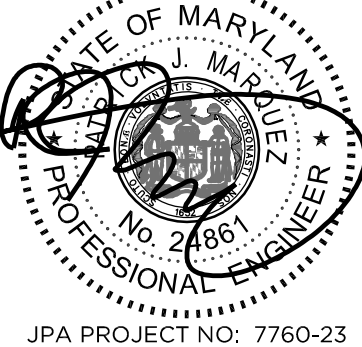
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Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2024.

PROJECT  
**Howard County Public School System  
Applications and Research Laboratory (ARL)  
Automotive Lab Renovation**  
10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD, 21042

DRAWING TITLE  
**ELECTRICAL SPECIFICATIONS**

 JPA PROJECT NO: 7760-23	DRAWN PJM	PROJECT # 23001.00
	CHECKED PJM	DRAWING #
	REVIEWED PJM	<b>E7.01</b>
	DATE 04/21/2023	SCALE AS INDICATED

ELECTRICAL SPECIFICATIONS (CONTINUED)

- 2. FUSES FOR ENCLOSED SWITCHES:
a. FUSES 0-600 AMPS FOR 600 V OR 250 V, UL LABELED CLASS RK1 WITH TIME DELAY...
b. FUSES FOR ENCLOSED SWITCHES FOR PACKAGED HVAC EQUIPMENT...
3. ENCLOSED CIRCUIT BREAKERS
a. MANUFACTURERS: EQUAL TO EATON, SCHNEIDER ELECTRIC (SQUARE D), OR SIEMENS.
b. SEPARATELY ENCLOSED CIRCUIT BREAKERS...
4. ENCLOSURES: INDOORS NEMA 250 TYPE 1; OUTDOORS TYPE 4X STAINLESS STEEL...
G. INSTALLATION OF PRODUCTS AND EQUIPMENT
1. MANUFACTURER'S INSTRUCTIONS...
H. PENETRATION OF WATERPROOF CONSTRUCTION...
I. PENETRATION OF FIRE-RATED CONSTRUCTION...
J. TESTS
1. DURING THE PROGRESS OF THE WORK AND AFTER COMPLETION...
K. CLEANING, PAINTING AND FINISHES:
1. CLEAN SURFACES PRIOR TO APPLICATION OF ADHESIVES...
26 4000 - DISTRIBUTION
A. ENCLOSED MOTOR CONTROLLERS
1. COMBINATION MOTOR STARTER/DISCONNECT...
B. PANELBOARDS
1. CIRCUIT BREAKERS: UL 489; VOLTAGE, CONTINUOUS-CURRENT RATING...
C. CLEANING
1. CLEAN INTERIOR AND EXTERIOR OF EQUIPMENT.
2. REFINISH PAINTED SURFACES DAMAGED DURING CONSTRUCTION...

- 26 5000 - LIGHTING
A. LED LIGHT ENGINES:
1. ENGINEERED MODULE CONTAINING QUANTITY AND WATTAGE OF LIGHT-EMITTING DIODES...
2. PERFORMANCE CRITERIA SHALL INCLUDE COLOR TEMPERATURE AND MINIMUM COLOR-RENDERING INDEX...
B. LED DRIVERS: EQUAL TO SIGNIFY/ADVANCE, OSRAM SYLVANIA, UNIVERSAL LIGHTING TECHNOLOGIES...
C. LIGHTING FIXTURES SHALL BE COMPLETE WITH CASINGS, FITTINGS, HOLDERS...
D. LIGHTING FIXTURE INSTALLATION
1. PROVIDE A COMPLETE LIGHTING FIXTURE FOR EVERY OUTLET...
2. FIXTURE WIRE SHALL BEAR UL LABEL...
3. EACH FIXTURE SHALL BE COMPLETELY EQUIPPED WITH LAMPS...
E. LIGHTING FIXTURE SUPPORT
1. SUPPORT FROM BUILDING STRUCTURE...
2. IN SUSPENDED PLASTER AND DRYWALL CEILINGS...
F. LIGHTING CONTROLS SYSTEM
1. COMPLETE, NON-NETWORKED DIGITAL LIGHTING CONTROLS SYSTEM...
2. BASIS-OF-DESIGN SYSTEM...
3. SYSTEM COMPONENTS SHALL BE UL LISTED...
4. NON-NETWORKED LIGHTING RELAY ROOM CONTROLLERS...
5. EMERGENCY LIGHTING CONTROL TRANSFER RELAY DEVICE...
6. LIGHTING CONTROL STATIONS...
7. SENSOR DEVICES:
a. OCCUPANCY SENSORS...
b. SENSOR POWER PACKS...
8. CONDUCTORS AND CABLES...
9. DEVICE PROGRAMMING REQUIREMENTS...
10. INSTALLATION:
a. INSTALL DEVICES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS...
b. MANUFACTURER'S FACTORY CERTIFIED FIELD SERVICE ENGINEER...
c. ROOM CONTROLLERS SHALL BE WALL MOUNTED...
d. PROVIDE A SINGLE COVER PLATE...
e. VERIFY DOOR SWINGS...
11. TESTING: PROVIDE SERVICES FROM FACTORY CERTIFIED FIELD SERVICE ENGINEER...
27 1000 - COMMUNICATIONS
A. INSTALLER QUALIFICATIONS...
B. SOURCE LIMITATIONS...
C. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES...
D. COMPLY WITH NFPA 70, ANSI/TIA/EIA.
E. CABLES, CONNECTORS, AND TERMINAL EQUIPMENT
1. UTP CABLES: CATEGORY 6, SOLID COPPER CONDUCTORS...
2. UTP CABLE CONNECTING HARDWARE...
3. PATCH PANEL: MODULAR PANELS HOUSING MULTIPLE-NUMBERED JACK UNITS...
4. JACKS AND JACK ASSEMBLIES FOR UTP CABLE...
5. UTP PATCH CORDS...
6. WORKSTATION OUTLETS:
a. FACEPLATE: HIGH-IMPACT PLASTIC...
b. MOUNTING: FLUSH...
c. LABEL: AS INDICATED...
7. UTP CABLE SUPPORTS FOR PLENUM-RATED CABLES...
F. COMMUNICATIONS INSTALLATION
1. COMPLY WITH REQUIREMENTS IN TIA/EIA-568-D AND TIA/EIA-569-D.
2. WIRING METHOD: INSTALL WIRING IN RACEWAY...
a. SUPPORT FOR PLENUM-RATED CABLES...
3. INSTALL CABLES USING TECHNIQUES, PRACTICES, AND METHODS...
4. INSTALL CABLES WITHOUT DAMAGING CONDUCTORS...
5. DO NOT BEND CABLES...
6. PULL CABLES WITHOUT EXCEEDING CABLE MANUFACTURER'S RECOMMENDED PULLING TENSIONS.
28 1000 - FIRE DETECTION AND ALARM SYSTEM
A. NEW COMPONENTS SHALL MATCH EXISTING EQUIPMENT.
B. SYSTEM FIELD WIRING
1. NON-POWER-LIMITED CIRCUITS...
2. POWER-LIMITED CIRCUITS...
3. WIRING SYSTEM...
C. PROVIDE WIRING, CONDUIT, AND OUTLET BOXES...
D. INSTALL WIRING IN CONDUIT.
E. FINAL CONNECTIONS BETWEEN EQUIPMENT...
F. AS MINIMUM REQUIREMENTS, THE SYSTEM SHALL BE TESTED TO SHOW THAT:
1. CIRCUITS ARE CONTINUOUS AND FREE FROM SHORT CIRCUITS.
2. CIRCUITS ARE FREE FROM UNSPECIFIED GROUNDS.
3. RESISTANCE TO GROUND OF NON-GROUNDED CIRCUITS...
4. CIRCUITS ARE PROPERLY CONNECTED...
5. EACH DETECTOR OPERATES CORRECTLY.
6. DETECTORS ARE CORRECTLY LOCATED AND SUFFICIENT IN NUMBER.
END OF ELECTRICAL SPECIFICATIONS

- 27 1000 - COMMUNICATIONS
A. INSTALLER QUALIFICATIONS: SYSTEM INSTALLER MUST HAVE ON STAFF A REGISTERED COMMUNICATION DISTRIBUTION DESIGNER...
B. SOURCE LIMITATIONS: OBTAIN ALL PRODUCTS EXCEPT TWISTED-PAIR AND FIBER-OPTIC CABLES...
C. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES...
D. COMPLY WITH NFPA 70, ANSI/TIA/EIA.
E. CABLES, CONNECTORS, AND TERMINAL EQUIPMENT
1. UTP CABLES: CATEGORY 6, SOLID COPPER CONDUCTORS...
2. UTP CABLE CONNECTING HARDWARE...
3. PATCH PANEL: MODULAR PANELS HOUSING MULTIPLE-NUMBERED JACK UNITS...
4. JACKS AND JACK ASSEMBLIES FOR UTP CABLE...
5. UTP PATCH CORDS...
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END OF ELECTRICAL SPECIFICATIONS

Table with 3 columns: NO, REVISION / SUBMISSION, DATE. Contains revision history for 75% SUBMISSION, 100% CONSTRUCTION DOCUMENTS, BID DOCUMENTS, and BID DOCUMENTS - REVISED FINAL.

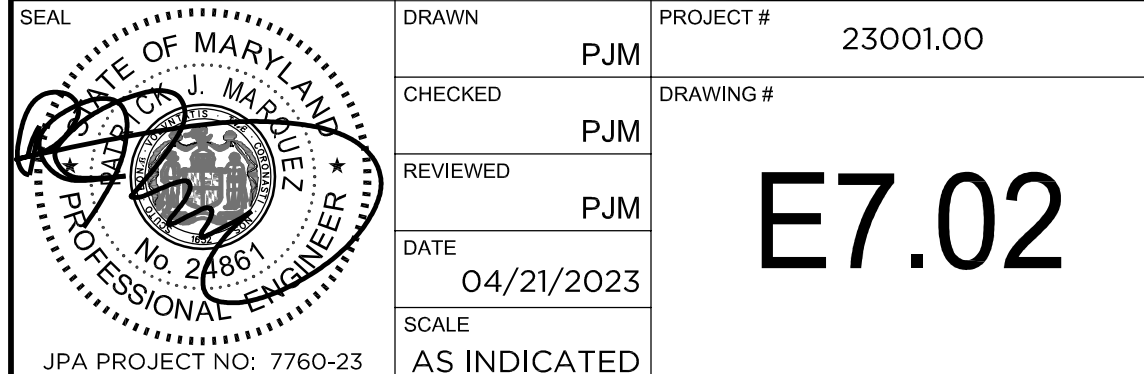
SM+P ARCHITECTS logo and contact information for SCHAMU MACHOWSKI + PATTERSON ARCHITECTS, INC.

STRUCTURAL CONSULTANTS: COLUMBIA ENGINEERING and MEP CONSULTANTS: JAMES POSEY ASSOCIATES.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 24861, Expiration date: 02-24-2024.

PROJECT: Howard County Public School System Applications and Research Laboratory (ARL) Automotive Lab Renovation. 10920 CLARKSVILLE PIKE, ELLICOTT CITY, MD. 21042

DRAWING TITLE: ELECTRICAL SPECIFICATIONS. Includes drawing details like DRAWN, CHECKED, REVIEWED, DATE, SCALE, PROJECT #, and DRAWING #.



E7.02