

**INVITATION FOR BIDS**  
**MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT**  
**IFB No. 2023-1005113**

**PROJECT MANUAL TABLE OF CONTENTS**

<b><u>BIDDING INFORMATION</u></b>	<b><u>Page No.</u></b>
Invitation for Bids	IFB-1
Bid Receipt and Bid Reading Procedures	
Instructions to Bidders	ITB-1 to ITB-9
Prebid Question Form	
Bid Form	BF-1 to BF-6
Certification of Crimes Against Children	1
<b><u>GENERAL CONDITIONS &amp; FORMS</u></b>	<b><u>Page No.</u></b>
Construction Contract General Conditions	1 - 61
Supplemental General Conditions	1 - 3
Special Conditions	1 - 3
	<b><u>AC Form #</u></b>
Contract Between Owner and Contractor	AC-9
Post Bid Modification	AC-9b
Standard Performance Bond	AC-10
Standard Labor and Material Payment Bond	AC-10.1
Construction Change Order	AC-11
Change Order Estimate (General Contractor)	GC-1
Change Order Estimate (Subcontractor)	SC-1
Change Order Estimate (Sub-subcontractor)	SS-1
Schedule of Values and Certificate for Payment	AC-12
Affidavit of Payment of Claims	AC-13
Architect/Engineer's Certificate of Substantial Completion	AC-13.1a
Architect/Engineer's Certificate of Completion	AC-13.1
Contractor's Certificate of Substantial Completion	AC-13.2a
Contractor's Certificate of Completion	AC-13.2

<b><u>Section</u></b>	<b><u>TECHNICAL SPECIFICATIONS</u></b>	<b><u>Page No.</u></b>
-----------------------	--	------------------------

**SPECIFICATIONS**

**DIVISION 1 – GENERAL REQUIREMENTS**

011000	Summary
012300	Alternates
012500	Substitution Procedures
012600	Contract Modification Procedures
012900	Payment Procedures
013100	Project Management
013200	Construction Progress Documentation
013300	Submittal Procedures
014000	Quality Requirements
014200	References

015000	Temporary Facilities and Controls
016000	Product Requirements
017300	Execution
017700	Closeout Procedures
017823	Operation and Maintenance Data
017839	Project Record Documents
018119	Indoor Air Quality Requirements non-LEED

DIVISION 9 – FINISHES

096513	Resilient Base and Accessories
096519	Resilient Floor Tile
099100	Painting

DIVISION 12 – FURNISHINGS

123216	Manufactured Plastic-Laminate-Faced Casework
123623	Plastic-Laminate-Clad Countertops

DIVISION 22 – PLUMBING

220500	Common Work Results for Plumbing
224000	Plumbing Fixtures

END OF TABLE OF CONTENTS

**NOTICE OF  
INVITATION FOR BIDS  
IFB-2023-1005113**

Sealed bids are invited for the Murray Elementary School Casework Renovation at 3251 Morgantown Rd, Charlottesville, VA 22903. The project is generally described as classroom casework replacement for 6-11 classrooms.

Sealed bids will be received at the Albemarle County Procurement Office, Room 248, Albemarle County Office Building, 401 McIntire Road, Charlottesville, Virginia. The deadline for submitting bids is 3:00 P.M., as determined by the Purchasing Agent, on May 11, 2023. The bid readings will be held at 3:30 pm on Monday, May 11, 2023. The bids will be virtually opened and read aloud by Purchasing personnel. Public attendance at the Bid Reading will be by virtual attendance through MS Teams Meeting. If the County of Albemarle is closed for business at the time scheduled for bid opening, for whatever reason, sealed bids will be accepted and opened on the next scheduled business day, at the originally scheduled time.

The estimated construction cost range for this project is \$100K-\$200K. A Bid Bond is required for any bid which exceeds \$100,000. The "Time for Completion" will be as detailed in the Bid Form.

Bids to be considered shall be received in a sealed envelope marked as follows: County of Albemarle, Procurement Office, Room 248, Albemarle County Office Building, 401 McIntire Road, Charlottesville, VA 22902 / Contract: Murray Elementary School Casework Renovation / IFB No. 2023-1005113. Procedures for submitting a bid, claiming an error, withdrawal of bids, and other pertinent information are contained in the Instructions to Bidders, which is part of the Invitation for Bids. Withdrawal due to error in bid shall be permitted in accord with Section 9 of the Instructions to Bidders and §2.2-4330A (i), Code of Virginia. The Owner reserves the right to reject any or all bids.

An In Person pre-bid conference will be held at 3251 Morgantown Rd, Charlottesville, VA 22903 at 3:00pm on April 18, 2023. Attendance will be optional for those submitting a bid.

The contract shall be awarded on a lump sum basis as follows: the Total Base Bid Amount plus such successive Additive Bid Items as the Owner in its discretion decides to award.

Contractor registration in accordance with Title 54.1, Chapter 11, of the Code of Virginia, is required. See the Instructions to Bidders for additional qualification requirements.

The Invitation for Bids for the above project, including the drawings and the specifications prepared by Moseley Architects and containing the information necessary for bidding, may be downloaded online from the Albemarle County Procurement web site at <https://www.albemarle.org/government/finance/procurement/solicitations>. Please note that Bidders are responsible to check the Procurement web site and download any Addenda issued for this Bid.

The County of Albemarle does not discriminate on the basis of race, religion, color, sex, national origin, age or disability, or against faith-based organizations as defined under the Virginia Public Procurement Act on the basis of such organization's religious or charitable character.



**Bid Receipt and Bid Reading Procedures**  
**2023-IFB-1005113 – Murray Elementary School Casework Renovation**

The following Albemarle County Purchasing Procedures shall be in effect:

1. Paper bids shall be prepared as usual and shall be delivered to the County Office Building at 401 McIntire Road, Charlottesville, VA 22902. Bids will be received in a secure manner and will be stored in such manner as to keep them in a secure status.
2. A secure lock box will be available, at the exterior of the County Office Building, at the front Visitors Entrance, and will be labeled **Vendor/Contractor Bids or Proposals Only**. Bids shall be placed in this box, prior to the established due date and time for each solicitation. It is the Offeror's responsibility to ensure that bids are received prior to the established bid due date and time.
3. Bids will be received in the lockbox until **3:00 pm ET on Monday, May 11, 2023**. Any further bids received will be ruled as late bids and will be retained un-opened. Late bids will not be considered. If you have any difficulty utilizing the lockbox please call the Purchasing Office, at 434- 296-5854.
4. Bid readings will be held at 3:30 pm on **Monday, May 11, 2023**. At the appointed time as noted below, the bids will be virtually opened and read aloud by Purchasing personnel. Public attendance at the Bid Reading will be by virtual attendance through MS Teams Meeting.
5. The bids shall be examined for conformance of all requirements of the solicitation including a signature, acknowledgement of addenda, and presence of a bid bond, when required. At the conclusion of the reading of the bids, purchasing staff will complete the due diligence to examine bids for determination of complete responsiveness and vendor responsibility and additional information, including the bid tabulation, will be provided as it becomes available.
6. On **Monday, May 11, 2023, at 3:30 pm ET**, the Virtual Bid Reading may be attended through the following MS Teams Meeting link:

## Microsoft Teams meeting

**Join on your computer, mobile app or room device**

[Click here to join the meeting](#)

Meeting ID: 274 526 742 26

Passcode: NomE7g

[Download Teams](#) | [Join on the web](#)

[Learn More](#) | [Meeting options](#)

## INSTRUCTIONS TO BIDDERS

**The Invitation For Bids (IFB)** consists of the Notice, this Instructions to Bidders, the Bid Form, the Pre-Bid Question Form, the Construction Contract General Conditions, the Supplemental General Conditions (if any), the Special Conditions (if any), the Forms to be used, and the Scope of Work as described by the Plans and Specifications, other documents listed in the Specifications, and any addenda which may be issued, all of which request qualified bidders to submit competitive prices or bids for providing the described work on the project.

1. **CONDITIONS AT SITE OR STRUCTURE:** Bidders shall be responsible for ascertaining pertinent local conditions such as location, accessibility, general character of the site or building, and the character and extent of existing work within or adjacent to the site. Claims, as a result of failure to have done so, will not be considered by the Owner. See Section 7 of the General Conditions entitled “Conditions at Site.”
  
2. **EXPLANATIONS TO BIDDERS:** Bidders may not rely on any oral explanation in regard to the meaning of drawings and specifications or oral instructions given before the award of the contract. Discrepancies, omissions or doubts as to the meaning of drawings and specifications shall be communicated in writing to the Architect/Engineer for interpretation. Bidders must use the “Prebid Question Form” provided in the bid documents. Bidders must so act to assure that questions reach the Architect/Engineer at least seven (7) days prior to the time set for the receipt of bids to allow a sufficient time for an addendum to reach them before the submission of their bids. If an addendum is required for clarification or interpretation of the Bid Documents, the addendum will be issued not later than five (5) days prior to the date set for the receipt of bids except an addendum withdrawing the invitation for bid or one which includes postponement of the date set for the receipt of bids. Any interpretation made will be in the form of an addendum to the Invitation For Bids, which will be made available to all bidders, and its receipt shall be acknowledged, in writing, by the bidder on the Bid Form.
  
3. **TIME FOR COMPLETION:**
  - (a) “Time for Completion” shall be designated by the Owner on the Invitation for Bids or other pre-bid documents and shall mean the number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. In some instances, the Time for Completion may be stated in the form of a Contract Completion Date based on a stipulated date of Notice to Proceed.

Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.
  - (b) When the Notice to Proceed is issued, it will state a Contract Completion Date, which has been set by the Owner based on date of the Notice to Proceed and the Time for Completion.
  - (c) The Contractor, in preparing and submitting his bid, is required to take into consideration normal weather conditions. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner as indicated in the General Conditions.

#### 4. PREPARATION AND SUBMISSION OF BIDS:

- (a) Bids shall be submitted on the forms furnished, or copies thereof, and shall be signed in ink. Erasures or other changes in a bid must be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Owner as being incomplete or nonresponsive.
- (b) Each bid must give the complete legal name and full business address of the bidder and be signed by the bidder, or the bidder's authorized representative, with his usual signature. Bids by partnerships must be signed in the partnership name by one of the general partners of the partnership or an authorized representative, followed by the designation/title of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which it is incorporated and by the signature and title of the person authorized to bind it in this matter. The name of each person signing shall be typed or printed below the signature. A signature on a bid by a person who identifies his title as "President," "Secretary," "Agent" or other designation without disclosing the principal firm, shall be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. Trade or fictitious names may be referenced by using "t/a \_\_\_" but bids shall be in the legal name of the person or entity submitting the bid.
- (c) Bids with the bid guarantee shall be enclosed in a sealed envelope which shall be marked and addressed as indicated by the advertisement. If a contract is for one hundred twenty thousand dollars (\$120,000) or more, or if the total value of all construction, removal, repair or improvements undertaken by the bidder within any twelve-month period is seven hundred fifty thousand dollars (\$750,000) or more, the bidder is required under Title 54.1, Chapter 11, Section 1100, Code of Virginia, as amended, to be licensed in Virginia as a "Class A Contractor." If a contract is for ten thousand dollars (\$10,000) or more, but less than one hundred twenty thousand dollars (\$120,000), or if the total value of all construction, removal, repair or improvements undertaken by the bidder within any twelve-month period is one hundred fifty thousand dollars (\$150,000) or more, but less than seven hundred fifty thousand dollars (\$750,000), the bidder is required to be licensed in Virginia as a "Class B Contractor."

If the bidder is not properly licensed in Virginia at the time the bid is submitted, or if the bidder fails to provide this information on his bid or fails to promptly provide said Contractor license number to the Owner in writing when requested to do so after the opening of bids, he shall be deemed to be in violation of Section 54.1-1115 of the Code of Virginia, as amended, and his bid will not be considered.

- (d) The Board for Contractors has interpreted its regulations to mean "a licensed Contractor can bid on a contract which contains work outside his license classification(s) as long as he subcontracts those items for which he is not qualified to licensed contractors with the appropriate License Classification and the work of the second party is incidental to the contract." Therefore, the Owner may, as a part of determining whether the bidder is "responsible," require the apparent low bidder

to submit a listing of his subcontractors along with the license number and classification or specialty of each.

- (e) The bidder must also place its Employer Identification Number (SSN or FEIN) in the space provided on the Bid Form.
- (f) Every bidder organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership must be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law. Any bidder organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 must include in its bid the identification number issued to it by the State Corporation Commission. Any bidder that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law shall include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized. A bidder required to be authorized to transact business in Virginia that fails to provide the required information shall not receive an award unless a waiver of this requirement and of any administrative policies and procedures established to implement Section 2.2-4311.2 of the Code of Virginia, as amended, is granted by the Owner.

If awarded the Contract, the bidder shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the Contract. Doing so shall be deemed to be a violation of Section 2.2-4311.2 and the bidder understands and agrees that the Owner may void the Contract if the bidder fails to comply with this provision.

## 5. **BID GUARANTEE:**

- (a) Any bid (including the Total Base Bid plus all Additive Bid Items) which exceeds one hundred thousand dollars (\$100,000) shall be accompanied by a Bid Bond payable to the Owner as obligee in an amount equal to five percent (5%) of the amount of the bid. A Bid Bond may be required for projects having bids of less than one hundred thousand dollars (\$100,000) if such requirement is stated in the Notice of Invitation for Bids. The Bid Bond must be issued by a surety company which is legally authorized by the Virginia State Corporation Commission to do fidelity and surety business in the Commonwealth of Virginia. **The bid bond shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney.** Such Bid Bond shall guarantee that the bidder will not withdraw his bid during the period of sixty (60) days following the opening of bids; that if his bid is accepted, he will enter into a formal contract with the Owner in accordance with the Contract Between Owner and Contractor included as a part of the IFB Documents; that he will submit a properly executed and authorized Standard Performance Bond and Standard Labor and Material Payment Bond on the forms included in the IFB documents; and that in the event of the withdrawal of said bid within said period, or failure to enter into said contract and give said bonds within ten (10) days after he has received notice of acceptance of his bid, or other forfeiture under the Bid Bond, the bidder shall be liable to the Owner for the difference between the amount specified in said bid and such larger amount for which the Owner may contract with another party to perform the work covered by said bid, up to the amount of the bid guarantee.

This amount represents the damage to the Owner on account of the default of the bidder in any particular hereof. See §2.2-4336 of the Code of Virginia.

- (b) See §2.2-4338 of the Code of Virginia for provisions allowing alternative forms of bid security in lieu of a Bid Bond.
- (c) The Bid Bonds or other bid security will be returned to all except the three lowest bidders after the formal opening of bids. The remaining Bid Bonds or bid security will be returned to the bidders after the Owner and the accepted bidder have executed the Contract and the Performance Bond and the Payment Bond have been approved by the Owner.
- (d) If the required Contract and bonds have not been executed within sixty (60) days after the date of the opening of the bids, then the bond or other bid security of any bidder will be returned upon his request, provided he has not been notified of the acceptance of his bid prior to the date of such request.

#### **6. WITHDRAWAL OR MODIFICATION OF BIDS:**

- (a) **WITHDRAWAL:** Bids may be withdrawn by written or telefaxed notice received from bidders prior to the deadline fixed for bid receipt. The bidder has sole responsibility to ensure that such notice is received by the Owner in the appropriate office designated in the Instructions to Bidders, and the Owner shall not be responsible for ensuring accurate or prompt delivery. A withdrawal must be signed by the person signing the sealed bid or by other individual(s) who is authorized to act on behalf of the bidder. Such authorization must be provided in writing at the time of withdrawal, and stated on the face of the withdrawal notice. Withdrawn bids may be resubmitted by the bidder up to the deadline fixed for bid receipt.
- (b) **MODIFICATION:** Bids may be modified only in the following manner. E-mail or telefaxed modifications are not acceptable. All modifications must be signed by the person signing the sealed bid or by an individual(s) who is authorized by him/her on the face of the bid. Written modifications may only be made on the bid form itself. Written modifications must be signed by the person making the modification. The modification must state specifically what is to be modified and by what amount or it must state the item to be modified and what the corrected amount should be. (e.g. “Deduct \$25,000 from Part A and from the Total Base Bid Amount”; or “Add \$23,456 to the Total Base Bid Amount”; or “Deduct \$15,650 from the Additive # 2 amount”. A modification to “Deduct \$25,000 from Part A” will only be applied to Part A and not to the Total Base Bid Amount). Unless otherwise specified by the Bidder in the modification, the modification will be applied to the TOTAL BASE BID AMOUNT shown on the Bid Form (e.g. a modification stating only “Deduct \$25,000” which is properly signed will be deducted from the Total Base Bid Amount shown on the Bid Form).

#### **7. RECEIPT OF BIDS:**

- (a) Bids will be received at or before the date and the hour and at the place stipulated in the Invitation for Bids as may be modified by subsequent Addenda.
- (b) It is the responsibility of the bidder to assure that his bid and any bid modifications are delivered to the place designated for receipt of bids by the date and hour (deadline) set for receipt of bids.

Therefore, it is the bidder's responsibility to take into account all factors which may impact on its bid deliverer/courier's ability to deliver the bid and to implement whatever actions are necessary to have the bid delivered to the proper bid receipt location prior to the bid receipt deadline. No bids or bid modifications submitted or offered after the date and hour designated for receipt of bids will be accepted or considered.

- (c) The Purchasing Agent is the Owner's representative designated to receive bids at the time and place noted in the IFB and to open the bids received at the appointed time.
- (d) The official time used for the receipt of responses is determined by reference to the clock designated by the Purchasing Agent. The Purchasing Agent shall determine when the Bid Receipt Deadline has arrived and shall announce that the Deadline has arrived and that no further bids or bid modifications will be accepted. All bids and bid modifications in the possession of the Purchasing Agent and his assistants at the time the announcement is completed are deemed to be timely, whether or not the bid envelope has been physically date/time stamped or otherwise marked by the time the Purchasing Agent makes the deadline announcement.

## **8. OPENING OF BIDS:**

- (a) Bids will be opened at the time and place stated in the Invitation for Bids or as modified by subsequent Addenda, and their contents publicly announced. The Purchasing Agent shall decide when the specified time for bid opening has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.
- (b) The provisions of §2.2-4342 of the Code of Virginia shall be applicable to the inspections of bids received.

- 9. ERRORS IN BIDS:** A bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder shall give notice of a claim to withdraw a bid, in writing, and submit his original work papers, documents and materials used in the preparation of his bid, to the Purchasing Agent within two business days after the conclusion of the opening of bids. §2.2-4330(B)(1) of the Code of Virginia.

Failure of a bidder to give notice and submit his original work papers, documents and materials used in the preparation of his bid on or before the time, date and place required shall constitute a waiver by that bidder of his right to withdraw his bid due to a mistake.

No bid may be withdrawn under this section when the result would be the awarding of the Contract on another bid of the same bidder or of another bidder in which the ownership of the withdrawing bidder is more than five percent (5%).

No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the Contract is awarded

or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted. The person or firm to whom the Contract was awarded and the withdrawing bidder are jointly liable to the Owner in an amount equal to any compensation paid to or for the benefit of the withdrawing bidder without such approval.

If a bid is withdrawn under authority of this section, the lowest remaining bid shall be deemed to be the low bidder on the project.

**10. REJECTION OF BIDS:** The Owner reserves the right to cancel the Invitation for Bids, to reject any and all bids at its sole discretion when such rejection is in the interest of the Owner, or to reject the bid of any bidder who is determined to be not responsive or not responsible. See §2.2-4319, Code of Virginia.

**11. DETERMINATION OF RESPONSIBILITY:**

Each bidder shall be prepared, if so requested by the Owner, to present evidence of his experience, qualifications and financial ability to carry out the terms of the Contract.

Prior to award of the Contract, an evaluation will be made to determine if the low bidder has the capability, in all respects, to perform fully the contract requirements and the moral and business integrity and reliability which will assure good faith performance, and who has been prequalified, if required. Factors to be evaluated may include, but are not limited to:

- (a) sufficient financial ability to perform the contract as evidenced by the bidder's ability to obtain payment and performance bonds from an acceptable surety;
- (b) appropriate experience to perform the Work described in the bid documents;
- (c) any judgments entered against the bidder, or any officers, directors, partners or owners for breach of a contract for construction;
- (d) any substantial noncompliance with the terms and conditions of prior construction contracts with a public body without good cause where the substantial noncompliance is documented; or
- (e) a conviction of the bidder or any officer, director, partner, project manager, procurement manager, chief financial officer, or owner in the last five years of a crime relating to governmental or nongovernmental construction or contracting;
- (f) any current debarment of the contractor, any officer, director or owner, from bidding or contracting by any public body of any state, any state agency, or any agency of the federal government.

The Owner reserves the right to disqualify or refuse to accept the bid of any bidder who has been convicted, or entered a plea of guilty or nolo contendere, in any federal or state court to any charge involving any unlawful, corrupt or collusive practice involving a public contract whether federal, state, or local, or who has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

A bidder who, despite being the apparent low bidder, is determined not to be a responsible bidder shall be notified in writing in conformance with the procedures in §2.2-4359 of the Code of Virginia.

## 12. AWARD OF CONTRACT:

- (a) **Basis for Contract Award:** The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder, if any, provided his bid is reasonable and it is in the best interest of the Owner to accept it and subject to the Owner's right to reject any and all bids and to waive informality in the bids and in the bidding. The Bid Form may contain a multi-part Base Bid and may contain Additive Bid Items. Determination of the lowest responsive bidder, if any, will be based on the Total Base Bid amount entered on the Bid Form including any properly submitted bid modifications plus as many Additive Bid Items taken in sequence as the Owner in its discretion chooses to Award. Where the sum of the values entered in the multiple parts do not agree with the Total Base Bid amount, the Total Base Bid amount entered on the Bid Form, including any properly submitted bid modifications, shall take precedence. In the event that the Total Base Bid from the lowest responsible bidder exceeds available funds, the Owner may negotiate the Total Base Bid amount with the apparent low bidder to obtain a contract price within available funds, pursuant to §2.2-4318 of the Code of Virginia and Section 12(c) herein.
- (b) **Informalities:** The Owner reserves the right to waive any informality in the bids when such waiver is in the interest of the Owner.
- (c) **Negotiation With Lowest Responsible Bidder:** If award of a contract to the lowest responsive and responsible bidder is precluded because of limitations on available funds, under the provisions of §2.2-4318 of the Code of Virginia (the Public Procurement Act), the Owner reserves the right to negotiate the Total Base Bid amount with the lowest responsive, responsible bidder to obtain a contract price within the available funds. This may involve changes in either the features or scope of the work included in the Base Bid. Such negotiations with the apparent low bidder may include reducing the quantity, quality, or other cost saving mechanisms involving items in the Total Base Bid. The Owner shall notify the lowest responsive and responsible bidder that such a situation exists and the Owner and bidder shall then conduct their negotiations in person, by mail, by telephone or by any means they find convenient. If an acceptable contract can be negotiated, the changes to the Invitation for Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the contract. If an acceptable contract cannot be negotiated, the Owner shall terminate negotiations and reject all bids.
- (d) **Notice of Intent to Award or Notice of Award:** The Notice of Award or the Notice of Intent to Award will be posted on the Albemarle County Purchasing Office web site with the Invitation for Bid procurement documents ([www.albemarle.org/purchasing](http://www.albemarle.org/purchasing)). Any bidder or offeror who desires to protest the award or decision to award a contract shall submit the protest in writing to the Albemarle County Purchasing Agent no later than ten days after the posting of the Notice of Award or Notice of Intent to Award, whichever comes first (§ 2.2-4360).

13. **CONTRACT SECURITY:** For contracts of more than \$100,000, the Standard Performance Bond (Form AC-10) and the Standard Labor and Material Payment Bond (Form AC-10.1) shall be required, as specified in the Invitation for Bids documents. See the General Conditions and §2.2-4337 and §2.2-4338 of the Code of Virginia. The Owner reserves the right to require such bonds for contracts less than \$100,000. If the Owner so elects, the requirement shall be set forth in the Invitation for Bids. **The bonds shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety within the Commonwealth of Virginia. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney.**

14. **CERTIFICATION:** The bidder, by his signature on the Bid Form, certifies that neither his organization nor any of its officers, directors, partners or owners is currently barred from bidding on contracts by the Commonwealth of Virginia, or any public body or agency of another state, or any agency of the federal government. See the statement “Disqualification of Contractors” in the Bid Form.
15. **ETHICS IN PUBLIC CONTRACTING:** The provisions, requirements and prohibitions as contained in Chapter 43, Article 6, §2.2-4367 et seq, Code of Virginia, pertaining to bidders, offerers, contractors, and subcontractors are applicable to this project.
16. **BUILDING PERMITS:** The Virginia Uniform Statewide Building Code shall apply to the Work and shall be administered by the local Building Official. The Building Permit will be obtained by the Contractor and paid for by the Owner. All other permits, local license fees, business fees, taxes, or similar assessments shall be obtained and paid for by the Contractor. See Section 25 of the General Conditions for utility connection fees and services.
17. **MINORITY UTILIZATION:** The County of Albemarle, Virginia, encourages the participation of minority businesses in public procurement activities. Towards that end, the Owner encourages firms to provide for the participation of minority owned businesses through partnerships, joint ventures, subcontracts, and other contractual opportunities.
18. **BID DOCUMENTS:** Bid Documents are the property of the Owner and are available electronically through the Albemarle County Purchasing Office web site at [www.albemarle.org/purchasing](http://www.albemarle.org/purchasing). Bidders are responsible to check the Purchasing web site and download any Addenda issued for the bid. A deposit is not required for downloading of electronic documents through the web site. The bidder is responsible for the cost of printing any contract documents necessary for bidding. If awarded a contract, the Owner will provide the contractor with two sets of contract documents (i.e. full sized drawings and specifications) for use in the field and the contractor will be responsible for the cost of printing any additional contract documents that may be needed.
19. **GENERAL CONDITIONS:** The County of Albemarle Construction Contract General Conditions are incorporated in the bid documents. If the General Conditions are incorporated by reference, the bidder may obtain a copy of the current edition of the Construction Contract General Conditions at no cost by request to the County of Albemarle, Facilities & Environmental Services - Project Management Division, 401 McIntire Road, Charlottesville, Virginia 22902 (434-872-4501).
20. **PREBID CONFERENCE:** See the Invitation for Bids for requirements for a prebid conference and whether such conference is mandatory or optional.
21. **INSPECTION OF BID DOCUMENTS:** Copies of the Invitation for Bids documents including Plans and Specifications will, upon request, be made available for inspection at the Albemarle County Facilities & Environmental Services Department - Project Management Division, or the A/E’s office.
22. **DRUG-FREE WORKPLACE REQUIRED:** Bidders are reminded that §2.2-4312 of the Code of Virginia requires that during the performance of the contract resulting from this solicitation, the contractor agrees to (i) provide a drug-free workplace for the contractor’s employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is

prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this solicitation, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

- 23. CERTIFICATION OF CRIMES AGAINST CHILDREN:** Pursuant to Virginia Code §22.1-296.1(C), as a condition of awarding a contract for the provision of services that require the contractor or his employees to have direct contact with students on school property during regular school hours or during school-sponsored activities, the School Board requires the contractor to provide certification that all persons who will provide such services have not been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child. Any person making a materially false statement regarding any such offense shall be guilty of a Class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services. This requirement does not apply to a contractor or his employees providing services to the School Board in an emergency or exceptional situation, such as when student health or safety is endangered or when repairs are needed on an urgent basis to ensure that school facilities are safe and habitable, when it is reasonably anticipated that the contractor or his employees will have no direct contact with students.

# PREBID QUESTION FORM

(Use separate form for each question submitted.)

DATE: \_\_\_\_\_

**PROJECT: Murray Elementary School Casework Renovation  
IFB-2023-1005113**

The following question concerns Drawing Sheet (number)\_\_\_\_\_:

---

---

---

---

---

---

The following question concerns Specifications Section (number)\_\_\_\_\_, page \_\_\_\_\_, paragraph \_\_\_\_\_:

---

---

---

---

---

---

All responses to questions will be made by Addendum.

Questions submitted by: \_\_\_\_\_  
Name Organization

Email Form To: County of Albemarle Purchasing – Christopher Beahm: [cbeahm@albemarle.org](mailto:cbeahm@albemarle.org)  
County of Albemarle Project Manager – Sheila Hoopmann: [shoopmann@k12albemarle.org](mailto:shoopmann@k12albemarle.org)  
MoseleyArchitects Project Manager - Jacqueline Hall [jhall@moseleyarchitects.com](mailto:jhall@moseleyarchitects.com)  
email for receipt of questions

Or  
Mail Form to: County of Albemarle  
Office of Procurement  
401 McIntire Road  
Charlottesville, Virginia 22902-4596

And

Moseley Architects, 85 West Gay Street, Harrisonburg, VA 22802  
Phone: 540-434-1346

## BID FORM

DATE: April 11, 2023

PROJECT TITLE: Murray Elementary School Casework Replacement  
IFB No 2023-1005113

TO: County of Albemarle, Virginia, and/or  
The School Board of Albemarle County, Virginia  
Office of Procurement – Room 248  
Albemarle County Office Building  
401 McIntire Road  
Charlottesville, VA 22902

In compliance with and subject to your Invitation for Bids and the documents therein specified, all of which are incorporated herein by reference, the undersigned bidder proposes to furnish all labor, equipment, and materials and perform all work necessary for construction of this project, in accordance with the Plans and Specifications dated April 11, 2023, and the Addenda noted below, as prepared by Moseley Architects of Richmond, Virginia for the consideration of the following amount:

**BASE BID (including the following parts but excluding work in Additive Bid Items):**

**BASE BID.**

Lump sum price for construction of the casework replacement in Classrooms 4, 5, 6, 11, Work Room, and Kitchen, complete and in accordance with the Plans and Specifications:

**BASE Bid =** \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

**ADDITIVE BID ITEM 1:** Lump sum price for casework replacement in Classrooms 7 and 8 complete, in accordance with the drawings and specifications is \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ )  
(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

**ADDITIVE BID ITEM 2:** Lump sum price for casework replacement in Classrooms 1, 2 and 3 complete, in accordance with the drawings and specifications is \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ ) (Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.)

Contract award will be based on the **TOTAL BASE BID AMOUNT shown above** (including any properly submitted bid modifications) plus as many Additive Bid Items taken in sequence as the Owner in its discretion decides to award.

The undersigned understands that time is of the essence and agrees that the time for Substantial Completion of the entire project shall be 59 consecutive calendar days from the date of commencement of the Work as specified in the Notice to Proceed, and Final Completion shall be achieved within 30 consecutive calendar days after the date of Substantial Completion as determined by the A/E.

Acknowledgment is made of receipt of the following Addenda:

---

---

If notice of acceptance of this bid is given to the undersigned within 30 days after the date of opening of bids, or any time thereafter before this bid is withdrawn, the undersigned will execute and deliver a contract in the prescribed form (County of Albemarle Contract Between Owner and Contractor, Form AC-9) within 10 days after the contract has been presented to him for signature. The required payment and performance bonds, on the forms prescribed, shall be delivered to the owner along with the signed Contract.

Immigration Reform and Control Act of 1986: The undersigned certifies that it does not and will not during the performance of the Contract for this project violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.

**DISQUALIFICATION OF CONTRACTORS:** By signing this bid or proposal, the undersigned certifies that this Bidder or any officer, director, partner or owner is not currently barred from bidding on contracts by any Agency of the Commonwealth of Virginia, or any public body or agency of another state, or any agency of the federal government, nor is this Bidder a subsidiary or affiliate of any firm/corporation that is currently barred from bidding on contracts by any of the same. We have attached an explanation of any previous disbarment(s) and copies of notice(s) of reinstatement(s).

**CERTIFICATION OF NO COLLUSION:** The undersigned does hereby certify in connection with the procurement and bid to which this Certification of No Collusion is incorporated that:

This bid is not the result of, or affected by, any act of collusion with another person engaged in the same line of business or commerce; nor is this bid the result of, or affected by, any act of fraud punishable under Article 1.1 of Chapter 12 of Title 18.2 of the Code of Virginia, 1950, as amended (18.2-498.1 et seq.).

The undersigned declares that they are fully authorized to sign the proposal on behalf of the firm listed and to all conditions and provisions thereof. The firm name given below is the true and complete name of the bidder and the bidder is legally qualified and licensed by the Commonwealth of Virginia, Department of Commerce, State Board for Contractors, to perform all Work included in the scope of the Contract.

Virginia License No. \_\_\_\_\_

Bidder \_\_\_\_\_  
(Name of Firm)

Contractor Class \_\_\_\_\_

By \_\_\_\_\_  
(Signature)

Valid Until \_\_\_\_\_

\_\_\_\_\_  
(Typed Name)

FEIN/SSN: \_\_\_\_\_

Title \_\_\_\_\_

If Partnership (List Partner's Names)

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

If Corporation, affix Corporate Seal & list  
State of Incorporation

State: \_\_\_\_\_  
(Affix Seal)

Business Address:

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

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

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

# STATE CORPORATION COMMISSION & REGISTERED AGENT FORM

## Virginia State Corporation Commission (SCC) registration information.

**Code of Virginia § 13.1-757. A foreign corporation may not transact business in the Commonwealth until it obtains a certificate of authority from the Commission.**

**The bidder:**

<input type="checkbox"/>	is a corporation or other business entity with the following Virginia SCC identification number: _____ <b>-OR-</b>
<input type="checkbox"/>	is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust <b>-OR-</b>
<input type="checkbox"/>	<p>is not required to obtain a certificate of authority from the Virginia SCC, pursuant to <i>Virginia Code</i> § 13.1-757(B) because its sole contact(s) with the Commonwealth consist(s) of:</p> <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Maintaining, defending, or settling any proceeding;</li> <li>2. <input type="checkbox"/> Holding meetings of the board of directors or shareholders or carrying on other activities concerning internal corporate affairs;</li> <li>3. <input type="checkbox"/> Maintaining bank accounts;</li> <li>4. <input type="checkbox"/> Maintaining offices or agencies for the transfer, exchange, and registration of the corporation's own securities or maintaining trustees or depositories with respect to those securities;</li> <li>5. <input type="checkbox"/> Selling through independent contractors;</li> <li>6. <input type="checkbox"/> Soliciting or obtaining orders, whether by mail or through employees or agents or otherwise, if the orders require acceptance outside this Commonwealth before they become contracts;</li> <li>7. <input type="checkbox"/> Creating or acquiring indebtedness, deeds of trust, and security interests in real or personal property;</li> <li>8. <input type="checkbox"/> Securing or collecting debts or enforcing deeds of trust and security interests in property securing the debts;</li> <li>9. <input type="checkbox"/> Owning, without more, real or personal property;</li> <li>10. <input type="checkbox"/> Conducting an isolated transaction that is completed within 30 days and that is not one in the course of repeated transactions of a like nature;</li> <li>11. <input type="checkbox"/> For a period of less than 90 consecutive days, producing, directing, filming, crewing or acting in motion picture feature films, television series or commercials, or promotional films which are sent outside of the Commonwealth for processing, editing, marketing and distribution. The term "transacting business" as used in this subsection shall have no effect on personal jurisdiction under § 8.01-328.1; or</li> <li>12. <input type="checkbox"/> Serving, without more, as a general partner of, or as a partner in a partnership which is a general partner of, a domestic or foreign limited partnership that does not otherwise transact business in the Commonwealth.</li> <li>13. <input type="checkbox"/> Transacting business in interstate commerce.</li> </ol>
<input type="checkbox"/>	is an out-of-state business entity that is including with this bid <b>an opinion of legal counsel</b> which accurately and completely discloses the undersigned bidder's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia. <b>Attach opinion of legal counsel to this form.</b>

**Registered Agent Information**

Please specify the Registered Agent who will accept service of process on your behalf.

Agent Name: \_\_\_\_\_

Physical Address (no Post Office Boxes):

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

I certify the accuracy of this information.

Signed: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

# OFFEROR DATA SHEET

Note: The following information is required as part of your response to this solicitation. Failure to complete and provide this sheet may result in finding your bid nonresponsive.

1. **Qualification:** The vendor must have the capability and capacity in all respects to satisfy fully all of the contractual requirements.

2. **Vendor's Primary Contact:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

3. **Years in Business:** Indicate the length of time you have been in business providing this type of good or service:

\_\_\_\_\_ Years \_\_\_\_\_ Months

4. **Vendor Information:**

FIN or FEI Number: \_\_\_\_\_ If Company, Corporation, or Partnership

5. Indicate below a listing of at least four (4) recent projects, either educational or governmental, that your company has successfully completed with similar scope, cost and complexity, include the date of services and the name, address, and email address, and telephone number of the point of contact.

A.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

B.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

C.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

D.	Company: _____	Contact: _____
	Phone: _____	Email: _____
	Dates of Service: _____	\$ Value: _____

I certify the accuracy of this information.

Signed: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

**CERTIFICATION OF CRIMES AGAINST CHILDREN  
AND ACTS OF MORAL TURPITUDE**

Contractor acknowledges that the implementation of this contract requires Contractor, Contractor's employees and/or subcontractors to have direct contact with Albemarle County Public Schools' students. Therefore, Contractor hereby certifies that neither Contractor nor, to the best of Contractor's knowledge, its employees and/or subcontractors have been convicted of a felony or any offense involving the sexual molestation or physical or sexual abuse or rape of a child.

Contractor further certifies and shall indicate below whether Contractor and, to the best of Contractor's knowledge, its employees and/or its subcontractors, who will have direct contact with Albemarle County Public School students, have been convicted of a crime of moral turpitude. Crimes of "moral turpitude" are those crimes involving lying, cheating or stealing.

For the purposes of this certification, "direct contact with students" means being in the presence of students during regular school hours or during school sponsored activities.

Contractor understands that, pursuant to Code of Virginia §22.1-296.1(C), making a materially false statement regarding offenses which are required to be included in the certification referenced above is a Class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services. Albemarle County Public Schools shall not be liable for materially false statements regarding the certifications required under this Contract.

.....

Have you or, to the best of your knowledge, any of your employees and/or subcontractors who will have direct contact with students been convicted of a crime of moral turpitude?

- NO
- YES (please explain)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_  
**Date**

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**COUNTY OF ALBEMARLE**



**CONSTRUCTION CONTRACT GENERAL CONDITIONS**

**TABLE OF CONTENTS**

1. DEFINITIONS ..... 3

2. CONTRACT DOCUMENTS ..... 7

3. LAWS, REGULATIONS AND PERMITS ..... 8

4. NONDISCRIMINATION ..... 10

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS ..... 11

6. TIME FOR COMPLETION ..... 11

7. CONDITIONS AT SITE..... 13

8. CONTRACT SECURITY ..... 14

9. SUBCONTRACTS ..... 14

10. SEPARATE CONTRACTS..... 15

11. CONTRACTOR’S AND SUBCONTRACTOR’S INSURANCE ..... 16

12. BUILDER’S RISK INSURANCE ..... 19

13. TAXES, FEES AND ASSESSMENTS ..... 20

14. PATENTS ..... 20

15. ARCHITECT/ENGINEER’S STATUS..... 20

16. INSPECTION ..... 22

17. PROJECT MANAGEMENT AND SUPERVISION BY CONTRACTOR..... 24

18. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES ..... 24

19. SCHEDULE OF THE WORK..... 25

20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT..... 29

21. ACCESS TO WORK ..... 30

22. SURVEYS AND LAYOUT ..... 30

23. PLANS AND SPECIFICATIONS..... 31

24. SUBMITTALS.....	32
25. FEES, SERVICES AND FACILITIES.....	34
26. EQUALS .....	35
27. AVAILABILITY OF MATERIALS .....	35
28. CONTRACTOR’S TITLE TO MATERIALS.....	36
29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP.....	36
30. WARRANTY OF MATERIALS AND WORKMANSHIP.....	38
31. USE OF SITE AND REMOVAL OF DEBRIS.....	38
32. TEMPORARY ROADS.....	39
33. SIGNS .....	39
34. PROTECTION OF PERSONS AND PROPERTY .....	39
35. CLIMATIC CONDITIONS.....	40
36. PAYMENTS TO CONTRACTOR.....	40
37. PAYMENTS BY CONTRACTOR (§2.2-4354, Code of Virginia) .....	44
38. CHANGES IN THE WORK.....	444
39. CONTRACTOR’S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT.....	50
40. OWNER’S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT FOR CAUSE ....	500
41. TERMINATION BY OWNER FOR CONVENIENCE.....	511
42. DAMAGES FOR DELAYS; EXTENSION OF TIME .....	52
43. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION.....	544
44. GUARANTEE OF WORK.....	555
45. ASSIGNMENTS OF CONTRACTUAL OBLIGATIONS.....	58
46. CONTRACTUAL DISPUTES (§2.2-4363, Code of Virginia) .....	58
47. ASBESTOS.....	58
48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT.....	59
49. PROJECT MEETINGS.....	59

## 1. DEFINITIONS

Whenever used in these Construction Contract General Conditions (“General Conditions”) or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof:

**Architect, Engineer, Architect/Engineer or A/E:** The term used to designate the Architect and/or the Engineer that contracts with the Owner to provide the Architectural and Engineering services for the Project. The A/E is a separate contractor and not an agent of the Owner. The term includes any associates or consultants employed by the A/E to assist in providing the A/E services.

**Beneficial Occupancy:** The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could, after obtaining necessary approvals and certificates, occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

**Building Permit:** See “Permit” below.

**Change Order:** A document (Form AC-11) issued on or after the effective date of the Contract Between Owner and Contractor (Form AC-9) which is agreed to by the Contractor and approved by the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract Price and/or the Contract Completion Date. A Change Order once signed by all parties, with the exception of a Unilateral Change Order that is only signed by the Owner, is incorporated into and becomes a part of the Contract.

**Claim:** 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 arising out of or relating to the Contract. Claims must be made by written notice. The responsibility to substantiate claims shall rest with the party making the claim.

**Code of Virginia:** 1950 Code of Virginia as amended. Sections of the Code referred to herein are noted by §xx-xx.

**Construction:** The term used to include new construction, reconstruction, renovation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

**Contract:** The Contract Between Owner and Contractor, Form AC-9, hereinafter referred to as the Contract.

**Contract Completion Date:** The date by which the Work must be substantially complete. The Contract Completion Date is customarily established in the Notice To Proceed, based on the Time for Completion. In some instances, however, the Contract contains a mandatory Contract Completion Date, which shall be stated in the Invitation for Bid or Request for Proposal, as applicable.

**Contract Documents:** The Contract Between Owner and Contractor (Form AC-9) signed by the Owner and the Contractor and any documents expressly incorporated therein. Such incorporated documents customarily include the bid submitted by the Contractor, these General Conditions, any Supplemental General Conditions, any Special Conditions, the plans and the specifications, and all modifications, including addenda and subsequent Change Orders.

**Contract Price:** The total compensation payable to the Contractor for performing the Work, subject to modification by Change Order.

**Contractor:** The person with whom the Owner has entered into a contractual agreement to do the Work.

**Date of Commencement:** The date as indicated in the written Notice to Proceed or a date mutually agreed to between the Owner and Contractor in writing.

**Day(s):** Calendar day(s) unless otherwise noted.

**Defective:** An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty, deficient, does not conform to the Contract Documents or does not meet the requirements of inspections, standards, tests or approvals required by the Contract Documents, or Work that has been damaged prior to the A/E's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion or Beneficial Occupancy).

**Drawing:** A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

**Emergency:** Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

**Field Order:** A written order issued by the A/E or Owner which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

**Final Completion Date:** The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Architect/Engineer and the Contractor that the Work is totally complete in accordance with Section 43(b).

**Final Payment:** The final payment that the Contractor receives pursuant to the applicable provisions of Section 36, except in the event no final payment is made due to termination of the Contract under either Sections 40 or 41. In the event of a termination for cause under Section 40, the Final Payment shall be when the termination became effective. In the event of a termination for convenience under Section 41, the Final Payment shall be either the payment of compensation for termination that the Contractor receives according to the provisions of Subsection 41, or the Owner's determination that no compensation for termination is due the Contractor under Subsection 41, as the case may be.

**Float:** The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the

contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without impacting the critical path and delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project float.

**Float, Free:** The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

**Float, Total:** The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

**Notice:** All written notices, including demands, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur: (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice is effective upon such delivery. All notices to the Owner should be directed to the Project Manager.

Notices transmitted by Facsimile (Fax) or Email are acceptable for the Project. If faxed, Notices shall be transmitted to the Fax number listed in the Contract and shall have a designated space for the Fax Notice recipient to acknowledge his receipt by authorized signature and date. The Fax Notice with authorized signature acknowledging receipt shall be Faxed back to the sender. If emailed, Notices shall be transmitted to the email address listed in the Contract. The Email Notice recipient shall acknowledge receipt by emailing back to the sender and responding to the Emailed Notice. Notice shall be effective upon the date of acknowledgment of the Faxed or Emailed Notice or the date of delivery, whichever occurs first.

**Notice to Proceed:** A written notice given by the Owner to the Contractor (with a copy to A/E) fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed will customarily identify a Contract Completion Date.

**Owner:** County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia.

**Permit:** The term "permit" as used herein shall mean any and all permits required to comply with local, state, and federal codes or laws (including but not limited to building permit, erosion and sediment control permit, and any other permit required by state, federal, and local jurisdictions).

**Person:** This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

**Plans:** The term used to describe the group or set of project-specific drawings and/or Architect/Engineer sketches which are included in the Contract Documents.

**Project:** The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the “Work” described by the Contract Documents.

**Project Inspector:** One or more persons and/or firms employed by the Owner to inspect the Work for the Owner and/or to document and maintain records of activities at the Site to the extent required by the Owner. The scope of the Project Inspector’s authority with respect to the Contractor is limited to that indicated in Section 16(e) and (f).

**Project Manager:** The Project Manager as used herein shall be the Owner’s designated representative on the Project. The Project Manager shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Project Manager. The Owner may change the Project Manager from time to time and may, in the event that the Project Manager is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Project Manager.

**Provide:** Shall mean furnish and install ready for its intended use.

**Schedule of Values:** The schedule prepared by the Contractor and acceptable to the Owner which indicates the value of that portion of the Contract Price to be paid for each trade or major component of the Work.

**Site:** Shall mean the location at which the Work is performed or is to be performed.

**Special Conditions:** Provisions of a contract that are specific to the project under consideration and do not fall under General Conditions or Supplemental General Conditions.

**Specifications:** That part of the Contract Documents containing the written administrative requirements and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Code Official to determine code compliance and for the Contractor to perform the Work. (The General Conditions, any Supplemental General Conditions, Special Conditions, various bidding information and instructions, and blank copies of various forms to be used during the execution of the Work are usually bound with the Specifications.)

**Subcontractor:** A person having a direct contract with Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project.

**Submittals:** All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

**Substantial Completion:** The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may, after

obtaining the necessary approvals and certificates, take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

**Supplemental General Conditions:** That part of the Contract Documents which amends or supplements the General Conditions.

**Supplier:** A manufacturer, fabricator, distributor, materialman or vendor who provides material for the Project but does not provide on-site labor.

**Time for Completion:** The number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. When the Notice to Proceed is issued, it states a Contract Completion Date, which has been set by the Owner based on the Time for Completion.

**Underground Facilities:** All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

**Unilateral Change Order:** A Change Order from the Owner directing the Contractor to proceed with work within the scope of the contract which may be undefined or for which there is no agreement on the cost or time associated with the work.

**Work:** The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be provided under the Contract Documents or which may reasonably be expected to be provided as part of a complete, code compliant and functioning system for those systems depicted in the plans and specifications.

## 2. CONTRACT DOCUMENTS

- (a) The Contract Between Owner and Contractor (AC-9), the Standard Performance Bond (AC-10), the Standard Labor and Material Payment Bond (AC-10.1), the Schedule of Values and Certificate for Payment (AC-12), the Affidavit of Payments of Claims (AC-13), the Contractor's Certificate of Substantial Completion (AC-13.2a), and the Contractor's Certificate of Completion (AC-13.2) issued by the County of Albemarle are forms incorporated in these General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein. They must be used by the Contractor for their respective purposes.
- (b) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.
- (c) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.

- (d) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Contract Between Owner and Contractor; the Special Conditions; the Supplemental General Conditions; the General Conditions; the specifications with attachments; and the plans.
- (e) If any provision of this Contract shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.
- (f) All correspondence, invoices, memoranda, submittals and other documents related to this Project whether generated by the Owner, the A/E, the Contractor or others should be identified at the beginning of the document with the Project Title shown in the Contract. Additional identification such as a job number, purchase order number or such may also be shown at the Owner's option.

### **3. LAWS, REGULATIONS AND PERMITS**

- (a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby. The Contractor shall assure that all Subcontractors and tradesmen who perform Work on the project are properly licensed by the Department of Professional and Occupational Regulation as required by Title 54.1, Chapter 11, Articles 1 and 3, Code of Virginia, and by applicable regulations.
- (b) This Contract and all other contracts and subcontracts are subject to the provisions of Articles 3 and 5, Chapter 4, Title 40.1, Code of Virginia, relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the Commonwealth, who perform any Work related to the Project shall comply with all of the said provisions.
- (c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.
- (d) The provisions of all rules and regulations governing safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia and as issued by the Department of Labor and Industry under Title 40.1 of the Code of Virginia shall apply to all Work under this Contract. Inspectors from the Department of Labor and Industry shall be granted access to the Work for inspection without first obtaining a search or administrative warrant.
- (e) Building Permit: The Virginia Uniform Statewide Building Code applies to the Work and is administered by the local Building Official. The Building Permit will be obtained by the Contractor and paid for by the Owner. All other permits, local license fees, business fees, taxes, or similar assessments shall be obtained and paid for by the Contractor. See Section 25 for utility connection fees and services.

- (f) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 37 of these General Conditions with respect to each lower-tier Subcontractor and Supplier.
- (g) The Contractor, if not licensed as an asbestos abatement contractor in accordance with §54.1-514, Code of Virginia, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors for the Work required.
- (h) Lead-Based Paint Activities: If the Contract Documents indicate that lead-based paint is present on existing materials, components, or surfaces, the Contractor shall conform to the following:
  - (1) The requirements set forth in 59 Federal Register 45,872 (September 2, 1994) Proposed Rule - Lead; Requirements for Lead-based Paint Activities (Proposed Rules) in selecting and performing the means, methods and procedures for performing the Work. This includes, but is not limited to, training of personnel, lead abatement, encapsulation of lead containing materials, removal and handling of lead containing materials, and methods of disposal. When the Final Rule, to be codified at 40 CFR 745, supersedes the Proposed Rule, the Contractor shall be responsible for conforming to the Final Rule, as of the effective date set forth therein.
  - (2) The requirements for employee protection contained in 29 CFR Part 1926, Subpart D, and the requirements for record-keeping contained in 29 CFR Part 1910.
  - (3) The Virginia Department of Labor and Industry's (DLI) Emergency Regulation published in the May 27, 1996 Virginia Register, requiring, among other things, that a permit be issued to the lead abatement contractor, or any subsequent regulation issued by DLI.
- (i) If the Contractor violates laws or regulations that govern the Project, the Contractor shall take prompt action to correct or abate such violation and shall indemnify and hold the Owner harmless against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder, that result from such violation.
- (j) Land Disturbance Activities: If the Work includes any land disturbing activities, the Contractor shall be responsible for obtaining an Albemarle County Land Disturbance Permit. The Contractor shall have an individual certified by the Department of Conservation and Recreation (DCR) as a Responsible Land Disturber (RLD) on the project site at all times during the construction project where land is being disturbed in accordance with §10.1-563, Code of Virginia.

All construction activities involving land disturbances equal to or exceeding ten thousand (10,000) square feet must be covered by a Virginia Stormwater Management Program (VSMP) permit approved and issued by the County in accordance with the County of Albemarle's Water Protection Ordinance. The Owner is responsible for securing permit coverage for all applicable land disturbing activities performed, including within any easements that directly relate to the construction site activity. The Contractor shall sign a certification statement to comply with all conditions of the

permit, shall accept assignment as the responsible party prior to issuance of the Land Disturbance Permit, and shall sign all Responsible Land Disturber (RLD) forms.

The Contractor shall be responsible for securing permit coverage for support facilities that are not located within the project limits of disturbance. The Contractor shall be responsible for all costs to obtain permit coverage for all support facilities (both on-site and off-site) not included in the construction plans or contract documents for the project. The Owner will not be responsible for any inconvenience, delay, or loss experienced by the Contractor as a result of his failure to gain access to any support facility areas at the time contemplated.

- (k) Environmental Permitting: The Contractor shall sign a certification to comply with all conditions of any environmental permits required for the project (e.g. wetland or stream mitigation permit, floodplain development permit, etc.). The Contractor shall adhere to any time-of-year restriction conditions as required by state and federal permitting agencies. No in-stream work shall be permitted during in-stream time-of-year restrictions.
- (l) Virginia Department of Transportation (VDOT) Land Use Permit: The Contractor shall be responsible to obtain a VDOT Land Use Permit for projects requiring such permit. The Contractor shall be responsible for all costs associated with obtaining such permit.
- (m) The Contractor is responsible for ensuring that all permits required to perform the work are obtained and that all conditions of those permits are met throughout the duration of the project.

#### **4. NONDISCRIMINATION**

- (a) §2.2-4311 of the Code of Virginia shall be applicable. It provides as follows:

“1. During the performance of this Contract the Contractor agrees as follows:

- (a) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- (b) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
- (c) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2. The Contractor will include the provisions of the foregoing paragraphs (a), (b) and c) in every subcontract or purchase order of over ten thousand dollars (\$10,000), so that the provisions will be binding upon each Subcontractor or vendor.”
- (b) Where applicable, the Virginians with Disabilities Act and the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

## **5. PROHIBITION OF ALCOHOL AND OTHER DRUGS**

- (a) §2.2-4312 of the Code of Virginia shall be applicable. It provides as follows:

“During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor’s employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor’s workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purposes of this section, “drug-free workplace” means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.”

- (b) The Contractor shall also establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:
  1. the manufacture, distribution, dispensation, possession, or use of alcohol, marijuana or other drugs, except possession and medically prescribed use of prescription drugs; and
  2. the impairment of judgment or physical abilities due to the use of alcohol, marijuana or other drugs, including impairment from prescription drugs.

## **6. TIME FOR COMPLETION**

- (a) The Time for Completion shall be designated by the Owner on the Invitation for Bids, Request for Proposals or other prebid/proposal documents. In some instances, the Time for Completion may be stated on the Invitation for Bids, Request for Proposals or other prebid/pre-proposal document in the form of a Contract Completion Date. The Work must be substantially completed by the Time for Completion or the Contract Completion Date. Unless otherwise specified, the Contractor shall achieve Final Completion within thirty (30) days after the date of Substantial Completion.
- (b) The Time for Completion shall be stated in the Contract Between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the

facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Time for Completion or Contract Completion Date, as set forth in the Contract, he shall be subject to payment of actual damages incurred by the Owner or liquidated damages, if provided for in the Contract.

- (c) The Contractor, in submitting his bid, acknowledges that he has taken into consideration normal weather conditions. The listing below defines the monthly anticipated days of adverse weather for each month and is based upon NOAA climatological data for Charlottesville, Virginia. Adverse weather days shall be days of actual precipitation of 0.10 inch or greater.

<u>Jan*</u>	<u>Feb*</u>	<u>Mar*</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec*</u>
6	6	7	6	8	6	8	8	6	5	5	6

\* In addition to the anticipated days of adverse weather noted above, the Contractor must include one day of adverse weather impact (snow, ice, mud) for each day of actual adverse weather during the months of January, February, March, and December.

The anticipated days provided above will constitute the baseline for adverse weather time evaluations.

For projects not involving buildings, throughout the portion of the contract from the date of Notice to Proceed until the project is substantially complete, actual adverse weather days are to be recorded by the Contractor and verified by the A/E each month.

For projects involving buildings, throughout the portion of the contract from the date of Notice to Proceed until the building is “dried in”, actual adverse weather days are to be recorded by the Contractor and verified by the Architect each month. The building shall be considered “dried in” when the exterior block walls or stud and sheathing walls are in place, and a temporary (or permanent) roof is in place. Upon determination by the Owner and Architect that the building is in fact dried in, requests for additional time due to weather delays will not be accepted for any work within the building footprint.

The total anticipated adverse weather days for the project shall be the sum of all the monthly days for each month from the date of Notice to Proceed until the project is substantially complete, or until the date the building is to be “dried in”, according to the Contractor’s schedule.

If the total number of actual adverse weather days plus adverse weather impact days exceeds the anticipated adverse weather days determined above, the excess days may be used as a basis to determine whether a Contractor is entitled to a time extension. The adverse weather must have prevented work for fifty percent (50%) or more of the Contractor’s work day and delayed work critical to the timely completion of the project.

The Contractor’s schedule must indicate the critical (path) work and must reflect the above anticipated adverse weather days for all weather dependent activities.

- (1) The extension requested must be supported by a delay in completion of the entire Project shown on the critical path of the accepted CPM Schedule or the approved bar graph schedule

required for the Project. Extensions will be granted only for delays in completion of the Project, not for that portion of any delay which consumes only “float” time.

- (2) A request for extension of time based on abnormal weather must be made in writing within ten (10) calendar days of the completion of the calendar month during which abnormal weather is claimed at the Site.
- (3) All of the evidence and data supporting the request (including both historical data and the recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request. That supporting data shall be submitted by the end of the calendar month following the month for which the request is made. Time extensions for adverse weather related days granted by the Owner will extend the Contract Completion Date but will not include additional compensation to the Contractor. Weather-related time extension(s) shall not be compensable.
- (d) The Contractor represents and agrees that he has taken into account in his bid the requirements of the bid documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work. The Contractor agrees and warrants that he will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy not later than the Time for Completion or Contract Completion Date. The Contractor agrees and warrants that he will achieve Final Completion of the Work (the entire completion of all Work, including “punch list” items), not later than the number of days as specified in the Contract Documents after achieving Substantial Completion.

## **7. CONDITIONS AT SITE**

- (a) The Contractor and its Subcontractors shall have visited the Site prior to bidding or submitting a bid or proposal and are totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing conditions, improvements and work within or adjacent to the Site. It is understood that the Contractor accepts conditions at the site as of the date of its bid or proposal and no allowances will be made after award for any future error or negligence by Contractor or Subcontractors. Claims, which result from the Contractor’s failure to do so, will be deemed waived.
- (b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Architect/Engineer before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the Architect/Engineer shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions. Any change in the cost of the Work or additional time needed for completion must be requested pursuant to Sections 38 and/or 42 of these General Conditions.

- (c) If the Contractor, during the course of the Work, observes the existence of any material which he knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

## **8. CONTRACT SECURITY**

- (a) For Contracts with a value exceeding one hundred thousand dollars (\$100,000), the Contractor shall deliver to the Owner or its designated representative, a Standard Performance Bond (Form AC-10) and a Standard Labor and Material Payment Bond (Form AC-10.1), each fully executed by the Contractor and one or more surety companies legally licensed to do business in Virginia and each in an amount equal to one hundred percent (100%) of the accepted bid. The bonds shall identify the name and address of an attorney-in-fact who is appointed to act on behalf of the surety within the Commonwealth of Virginia. The attorney-in-fact shall affix to the bond a certified and current copy of the power of attorney. If more than one Surety executes a bond, each shall be jointly and severally liable to the Owner for the entire amount of the bond. Sureties shall be selected by the Contractor, subject to approval by the Owner. No payment on the Contract shall be due and payable to the Contractor until the bonds have been approved by the Owner. The Standard Performance Bond and Standard Labor and Material Payment Bond will be held for one year after final acceptance of the Work or as described in the bond forms.
- (b) For the purposes of all Standard Labor and Material Payment Bonds entered into, the term “subcontractors” as used in §2.2-4337(A.2) of the Code of Virginia is interpreted to mean any contractors who participated in the prosecution of the Work undertaken by the Contractor (referred to in §2.2-4337(A.2) of the Code of Virginia as the “prime contractor”), whether such contractor had a direct contract with the Contractor (prime contractor) or whether there were one or more other intervening Subcontractors contractually positioned between it and the Contractor (prime contractor).
- (c) See §2.2-4338 of the Code of Virginia, for alternative forms of security for payment and/or performance bonds.
- (d) For contracts with a value of less than one hundred thousand dollars (\$100,000), the Contractor will not be required to provide a Standard Performance Bond and a Standard Labor and Material Payment Bond as described above unless the Invitation for Bid or Request for Proposal states that such bonds will be required.

## **9. SUBCONTRACTS**

- (a) The Contractor shall, as soon as practicable after the signing of the Contract and prior to commencement of Work, notify the Owner and Architect/Engineer in writing of the names of all Subcontractors proposed for the Work and of such others as the Architect/Engineer may direct. Subcontractors whose names do not appear on the list must be approved by the Owner. Where the specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals

performing Work on the Project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object to as unsuitable. Neither the Owner nor the Architect/Engineer shall direct the Contractor to contract with any particular Subcontractor unless provided in the specifications or Invitation for Bids or Request for Proposal.

- (b) The Owner may select a particular Subcontractor for a certain part of the Work and designate on the Invitation for Bids or Request for Proposal that the Subcontractor shall be used for the part of the Work indicated and that the Subcontractor has agreed to perform the Work for the subcontract amount stipulated on the bid or proposal form. The Contractor shall include in his bid the amount stipulated by the Owner in the bid form. In such case, the Contractor shall be responsible for that Subcontractor and its work and all scheduling and coordination associated with the work. The Subcontractor shall be responsible to the Contractor for its work just as if the Contractor had selected the Subcontractor.
- (c) The Owner shall, on request, furnish to any Subcontractor, if practicable, the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.
- (d) The Contractor shall be fully responsible to the Owner for all acts and omissions of his agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner or Architect/Engineer and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Architect/Engineer to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.
- (e) The Contractor shall be fully responsible for his invitees at the Site and for those of his Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitee.
- (f) The Contractor agrees that he alone is responsible for all dealings with his Subcontractors and Suppliers, and their subcontractors, employees and invitee, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.

## **10. SEPARATE CONTRACTS**

- (a) The Owner reserves the right to let other contracts in connection with the Project, the Work under which may proceed simultaneously with the execution of this Contract. The Contractor shall afford other separate contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work. The Contractor shall cooperate with them and shall take all reasonable action to coordinate his Work with theirs. If the Owner has listed other separate contracts in the Invitation for Bids or Request for Proposal which it expects to proceed simultaneously with the Work of the Contractor, and has included the estimated timing of such other Contracts in the Invitation for Bids or Request for Proposal, the Contractor shall integrate the schedule of those separate contracts into his scheduling. The Contractor shall make every reasonable effort to assist

the Owner in maintaining the schedule for all separate contracts. If the work performed by the separate contractor is defective or performed so as to prevent or threaten to prevent the Contractor from carrying out his Work according to the Contract, the Contractor shall immediately notify the Owner and the Architect/Engineer upon discovering such conditions.

- (b) If a dispute arises between the Contractor and any separate contractor(s) as to their responsibility for cleaning up as required by Sections 31(c) and 31(d) of these General Conditions, the Owner may clean up and charge the cost thereof to the respective contractors in proportion to their responsibility. If a Contractor disputes the Owner's apportionment of clean-up costs, it shall be that contractor's burden to demonstrate and prove the correct apportionment.

## 11. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

### A. General Requirements:

(a) Certificate of Insurance-General Contractor: Prior to execution of the Contract by the Owner, the Contractor shall provide written evidence (certificates of insurance) that he has obtained all the insurance required hereunder from an insurer authorized to do business in Virginia and such insurance has been approved by the Owner. Insurance providers must have an agent licensed to do business in Virginia. The Owner must be identified on the certificate(s) of insurance as an additional insured for all types of insurance coverage, except for workers' compensation and professional liability, and there shall be a statement provided on the certificate(s) confirming the Owner is named as an additional insured and so endorsed to the policy(ies). In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner.

(b) Certificate of Insurance-Subcontractor: The Contractor shall not allow any Subcontractor to commence Work on his subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. The Owner shall have no responsibility to verify compliance by the Contractor, or its subcontractors or suppliers. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner.

**B. Insurance Requirements:** By signing and submitting a proposal under this solicitation, the offeror certifies that if awarded the contract, it will purchase and maintain, at its sole expense, and from a company or companies authorized to do business within the Commonwealth of Virginia, insurance policies containing the following types of coverages and minimum limits, protecting from claims which may arise out of or result from the Offerors' performance or non-performance of services under this Contract, or the performance or non-performance of services under this Contract by anyone directly or indirectly employed by the Offeror or for whose acts it may be liable. The Supplemental General Conditions detail the minimum amounts required for this solicitation.

- (a) Workers' Compensation to include Employer's Liability of an amount not less than \$100,000/\$500,000/\$100,000. Coverage is compulsory for employers of three or more employees, to include the employer. Businesses who hire subcontractors who will perform the same trade or are hired to fulfill contract requirements must include the subcontractor's employees when determining the total number of employees for workers compensation. A waiver of subrogation in favor of the County of Albemarle and its officers, employees, agents, and volunteers must be endorsed on the workers

compensation policy. Contractors who fail to notify the County of increases in the number of employees that change their workers' compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract. This policy shall specifically list Virginia as a covered state.

- (b) General Liability – of an amount not less than \$1,000,000 per occurrence/\$2,000,000 aggregate limit, and a per project aggregate limit of \$2,000,000.-CGL form CG 2010 11/85 edition or its equivalent is required to be endorsed to the commercial general liability policy. Commercial General Liability is to include bodily injury and property damage, personal injury, advertising injury, arising out of premises, operations, and products and completed operations. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the policy. A waiver of subrogation in favor of Albemarle County Government is required on the commercial general liability policy.
- (c) Automobile Liability – of an amount not less than \$1,000,000 per accident. Coverage is to include hired, owned, non-owned, temporary, and leased vehicles. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the auto policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial auto policy.
- (d) Umbrella or Excess Liability Coverage- of an amount not less than \$1,000,000. Must be follow form and go over the underlying general liability, commercial auto and employers liability policies. The County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the Umbrella or Excess Liability policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial Umbrella or Excess Liability policy.
- (e) Environmental/pollution - of an amount not less than \$1,000,000. County of Albemarle and its officers, employees, agents and volunteers must be named as additional insureds on a primary and non-contributory basis and be so endorsed on the Environmental/pollution Liability policy. A waiver of subrogation naming the County of Albemarle and its officers, employees, agents and volunteers is also required on the commercial Environmental/pollution Liability policy.
- (f) Professional (E&O) Liability Insurance - of an amount not less than \$1,000,000
- (g) Cyber Liability - of an amount not less than \$1,000,000

**All insurance coverage:**

1. shall be issued by an insurance carrier authorized to do business within the Commonwealth of Virginia and rated A – VIII or better, by A. M. Best Company or equivalent rating from an alternate recognized ratings agency, and otherwise acceptable to the County;
2. shall be kept in force throughout performance of services;
3. shall be an occurrence based policy; professional liability may be claims made basis;
4. shall include completed operations coverage;
5. shall contain a cross liability or severability of interest clause or endorsement. Insurance covering the specified additional insured shall be primary and non-contributory, and all other insurance carried by the additional insureds shall be excess insurance;
6. where additional insured required, such policy shall not have a restriction on the limits of coverage provided to the County as an additional insured. The County shall be entitled to protection up to the full limits of the offerors’s policy regardless of the minimum requirements specified in the Contract.

**Proof Of Insurance:** Prior to performance of any services or delivery of goods, the Offeror shall (i) have all required insurance coverage in effect; (ii) the Offeror shall deliver to the County certificates of insurance for all lines of coverage. The Offeror shall be responsible that such coverage evidenced thereby shall not be substantially modified or canceled without 30 days prior written notice to the County; and (iii) the Offeror shall deliver to the County endorsements to the policies which require the County and its officials, officers, employees, agents and volunteers be named as “additional insured”. Policies which require this endorsement include: Commercial General Liability, Automobile Liability and, umbrella or excess liability coverage as detailed below. Such endorsements must be approved by the County, and (iv) upon the request of the County, provide any other documentation satisfactory to the County in its sole discretion, evidencing the required insurance coverage, including but not limited to a copy of the insurance policy and evidence of payment of policy premiums. The Offeror shall require each of its subcontractors and suppliers to have coverage per the requirements herein in effect, prior to the performance of any services by such subcontractors and suppliers. Further, the Offeror shall ensure that all Required Insurance coverages of its subcontractors and suppliers is and remains in effect during performance of their services on the Project and certifies by commencement of the Work that this insurance and that of subcontractors is in effect and meets the requirements set forth herein. The County shall have no responsibility to verify compliance by the Offeror or its subcontractors and suppliers.

**Effect Of Insurance:** Compliance with insurance requirements shall not relieve the Offeror of any responsibility to indemnify the County for any liability to the County, as specified in any other provision of this contract, and the County shall be entitled to pursue any remedy in law or equity if the Offeror fails to comply with the contractual provisions of this contract. Indemnity obligations specified elsewhere in this Contract shall not be negated or reduced by virtue of any insurance carrier's denial of insurance coverage for the occurrence or event which is the subject matter of the claim, or by any insurance carrier’s refusal to defend any named insured.

**Waiver Of Subrogation:** The Offeror agrees to release and discharge the County of Albemarle and its officers, employees, agents and volunteers of and from all liability to the Offeror, and to anyone claiming by, through or under the Offeror, by subrogation or otherwise, on account of any loss or damage to tools, machinery, equipment or other property, however caused.

**Sovereign Immunity:** Nothing contained herein shall affect, or shall be deemed to affect, a waiver of

the County's sovereign immunity under law.

**Right to Revise or Reject:** The County reserves the right, but not the obligation, to revise any insurance requirement not limited to limits, coverages and endorsements, or reject any insurance policies which fail to meet the criteria stated herein. Additionally, the County reserves the right, but not the obligation, to review and reject any insurer providing coverage due to its poor financial condition or failure to operate legally.

**Umbrella or Excess Liability Coverage** which includes premises/operations, product/completed operations, and has per-occurrence limits as detailed in the Supplemental General Conditions. This insurance shall name the County and its officials, officers, and employees and agents as "additional insureds" by **endorsement** to the Umbrella or Excess Liability policy. Such policy shall not have a restriction on the limits of coverage provided to the County of Albemarle as an additional insured. The County of Albemarle shall be entitled to protection up to the full limits of the Offeror's policy regardless of the minimum requirements specified in this contract.

**Professional Liability Insurance:** At its sole expense, and prior to commencing any activities under this Agreement, Offeror shall secure professional liability insurance, covering any damages caused by the negligent or wrongful acts or omissions of the Offeror, its employees and agents in the performance of this Agreement, with coverage in an amount as detailed in the Supplemental General Conditions ("Required Insurance"). Offeror shall maintain the Required Insurance in effect throughout the Term of this Agreement and for a period of three (3) years following final acceptance of the Project by the County. Upon execution of this Agreement, Offeror shall provide the County with a certificate of insurance, or other written documentation satisfactory to the County in its sole discretion, issued by Offeror's insurance company(ies), confirming the Required Insurance and the beginning and ending date(s) of Contractor's policy(ies). Upon receipt of any notice, verbal or written, that the Required Insurance is subject to cancellation, Offeror shall immediately (within one business day) notify the County. Offeror's failure to comply with any of the requirements of this Section shall constitute a material breach of this Agreement entitling the County to terminate this Agreement without notice to Offeror and without penalty to the County.

C. **Installation Floater:** if applicable, the Contractor is required to purchase an Installation Floater to cover their own property to be installed into a building. Coverage is provided for equipment and/or machinery being installed, renovated or repaired during the course of construction.

## 12. BUILDER'S RISK INSURANCE

(a) The Contractor, at his cost, shall obtain and maintain in the names of the Owner and the Contractor builder's risk insurance on a special causes of loss form, including the costs of excavations, backfills, foundations, underground utilities and site work (or fire, extended coverage, vandalism and malicious mischief insurance, if approved by the Owner) upon the entire structure or structures on which the Work of this Contract is to be done, and upon all material in or adjacent thereto which is intended for use thereon, to one hundred percent (100%) of the insurable value thereof. Such insurance may include a deductible provision if the Owner so provides in the Supplemental General Conditions, in which case the Contractor will be liable for such deductions, whenever a claim arises. The loss, if any, is to be made adjustable with and payable to the Owner, in accordance with its interests, as they may appear. The Owner, its officers, employees and its agents, shall be named as

loss payee in any policy of insurance issued. Written evidence of the insurance shall be filed with the Owner prior to execution of the Contract by the Owner. Insurance providers must be authorized to do business in Virginia and have an agent licensed to do business in Virginia. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner. A copy of the policy of insurance shall be given to the Owner upon demand.

- (b) Certain projects, such as renovations and interior modifications of existing buildings, may be covered by the Owner's insurance and may be excluded from the Builder's risk policy purchased by the contractor insurance required by this section. In those instances, the Supplemental General Conditions for the project shall expressly exclude the project from the requirements of Subsection 12(a).
- (c) Any insurance provided through the County of Albemarle, Virginia, for construction, additions or renovations will not extend to Contractor's nor Subcontractors' buildings, equipment, materials, tools or supplies unless these items are to become property of the Owner upon completion of the Project and the Owner has assumed responsibility for such items at the time of the loss.

### **13. TAXES, FEES AND ASSESSMENTS**

The Contractor shall, without additional expense to the Owner, pay all applicable federal, state, and local taxes, fees, and assessments except the taxes, fees and assessments on the real property comprising the Site of the project. The Owner shall pay inspection fees to the local building official except for reinspection fees resulting from incomplete or defective work.

### **14. PATENTS**

The Contractor shall obtain all licenses necessary to use any invention, article, appliance, process or technique of whatever kind and shall pay all royalties and license fees. The Contractor shall hold the Owner, its officers, agents and employees, harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless such invention, process, technique, article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, he shall promptly advise the Owner and the Architect/Engineer. The Owner may direct that some other invention, process, technique, article or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article or appliance so specified is an infringement of a patent, and fail to inform the Owner and the Architect/Engineer, he shall be responsible for any loss or liability due to the infringement.

### **15. ARCHITECT/ENGINEER'S STATUS**

- (a) The Architect/Engineer shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. He shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue Field Orders to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work, subject to the right of the Owner to make an overriding decision to the contrary. Upon request by the Contractor, the Architect/Engineer shall confirm, in writing within ten (10) days, any oral order or determination made by him.
- (b) The Architect/Engineer shall have no authority to approve or order changes in the Work which alter the design concept or which call for an extension of time or a change in the Contract Price.
- (c) The Owner shall have the right, but not the duty, to countermand any decision of the Architect/Engineer and to follow or reject the advice of the Architect/Engineer, including but not limited to acceptance of the Work.
- (d) All orders from the Owner to the Contractor shall either be transmitted through the Architect/Engineer or communicated directly to the Contractor and the Architect/Engineer by the Owner.
- (e) Should the Owner choose to employ another or different Architect/Engineer, the status of the Architect/Engineer so employed shall be the same as that of the former Architect/Engineer.
- (f) The Architect/Engineer will provide to the Owner and the Contractor after each visit to the Site, a written report indicating the date, time of day, weather conditions and the names of the persons representing the Architect/Engineer who participated in the visit. The report will advise the Owner of any problems that were noted and shall compare the Architect/Engineer's observations of the actual progress of the Work with that reported by the Contractor. On the basis of his on-site observations as Architect/Engineer, he will make every reasonable effort to guard the Owner against defects and deficiencies in the Work of the Contractor. He shall have the authority to inspect the Work, to note and report Defective Work and deviations from the Contract Documents to the Owner, to reject same, and to recommend to the Owner the suspension of the Work when necessary to prevent Defective Work from proceeding or being covered.
- (g) The Architect/Engineer shall not be responsible for construction means, methods, techniques, sequences or procedures (other than those expressly specified in Contract Documents), or for safety precautions and programs in connection with the Work, and he shall not be responsible for the Contractor's failure to carry out the Contractor's own responsibilities.
- (h) The provisions of this section are included as information only to describe the relationship between the Owner, A/E, and Contractor. No failure of the A/E to act in accordance with this section shall relieve the Contractor from his obligations under the Contract or create any rights in favor of the Contractor.

## 16. INSPECTION

- (a) All material and workmanship shall be subject to inspection, examination and testing by the Owner, the Architect/Engineer, the Project Inspector, authorized inspectors and authorized independent testing entities at any and all times during manufacture and/or construction. The Architect/Engineer and the Owner shall have authority to reject defective material and workmanship and require its correction. Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefor, and the Contractor shall promptly segregate and remove the rejected material from the Site. If the Contractor fails to proceed at once with replacement of rejected material and/or the correction of defective workmanship, the Owner may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed as provided in Section 40 of these General Conditions, the Contractor and surety being liable for any damage to the same extent as provided in Section 40 for termination thereunder.
- (b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities, shall be contracted and paid for by the Owner. The Contractor shall schedule all required tests, approvals and inspections of the Work or other work related to the Project. If items/areas to be inspected and/or tested are not ready for inspection when the testing agency/inspector arrives on-site at the pre-arranged time, the Contractor is responsible for all costs associated with inspection delays, including but not limited to reinspection fees. The Contractor shall give proper notice to all required parties of such tests, if feasible, so that the Owner and others may observe the tests at the normal place of testing. Unless otherwise required by the Contract Documents, required certificates of testing, approval or inspection shall be secured by the Contractor and promptly delivered to the Owner. Examples of such tests are the testing of cast-in-place concrete, foundation materials, soil compaction, pile installations, caisson bearings and steel framing connections. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of reexamination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes, standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or ASTM. If fees are charged for such tests and certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which he chooses to perform for his own purposes, but are not required by the Contract.
- (c) Where Work is related to or dependent on the Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved and the Owner has approved corrective measures.
- (d) Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire Work to make an examination of any part of the Work already completed, by removing or tearing out portions of the Work, the Contractor shall on request promptly furnish all necessary

facilities, labor and material to expose the Work to be tested to the extent required. If such Work is found to be defective in any respect, due to the fault of the Contractor or his Subcontractors, the Contractor shall defray all the expenses of uncovering the Work, of examination and testing, and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of the Contractor's labor and material necessarily involved in uncovering the Work, the cost of examination and testing, and Contractor's cost of material and labor necessary for replacement including a markup of ten percent (10%) for overhead and profit shall be paid to the Contractor and he shall, in addition, if completion of the Work has been delayed thereby, be granted a suitable extension of time. Notwithstanding the foregoing, the Contractor shall be responsible for all costs and expenses in removing and replacing the Work if the Contractor had covered the Work prior to any inspection or test contrary to the instructions of the A/E, Owner or Project Inspector.

- (e) The Project Inspector has the right and the authority to:
- (1) Inspect all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and submittals;
  - (2) Inspect workmanship for compliance with the standards described in the Contract Documents;
  - (3) Observe and report on all tests and inspections performed by the Contractor;
  - (4) Recommend rejection of Work which does not conform to requirements of the Contract Documents;
  - (5) Keep a record of construction activities, tests, inspections, and reports;
  - (6) Attend all joint Site construction meetings and inspections held by the Owner and/or the A/E with the Contractor;
  - (7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract;
  - (8) Check installations for proper workmanship and conformance with shop drawing and installation instructions;
  - (9) Assist in the review and verification of the Schedule of Values & Certificate for Payment, submitted by the Contractor each month;
  - (10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing.
- (f) The Project Inspector has no authority to:
- (1) Authorize deviations from the Contract Documents;
  - (2) Enter into the area of responsibility of the Contractor's superintendent;
  - (3) Issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work;

- (4) Authorize or suggest that the Owner occupy the Project, in whole or in part; or
- (5) Issue a certificate for payment.
- (g) The duties of the Project Inspector are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Inspector, nor shall the failure of the Project Inspector to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

## **17. PROJECT MANAGEMENT AND SUPERVISION BY CONTRACTOR**

- (a) The Contractor shall have a competent project manager or superintendent, satisfactory to the Architect/Engineer and the Owner, on the Site at all times during the progress of the Work. The Contractor shall submit for approval by the Owner and Architect/Engineer the resumes for the proposed project manager and superintendent within ten (10) days from Notice of Intent to Award Contract. The project manager and superintendent shall be familiar with and be able to read and understand the plans and specifications, and be capable of communicating orally and in writing with the Owner's project manager and/or inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner, in writing, and obtain approval, of any proposed change in project manager or superintendent, including the reason therefor, prior to making such change.
- (b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.
- (c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

## **18. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES**

- (a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. However, the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents.

The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Architect or Engineer, the Project Inspector, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.

- (b) If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Architect/Engineer, subject to the Owner's right to disapprove. The Contractor must submit its written request for the substitution to the Architect/Engineer with sufficient information to allow the Architect/Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract.
- (c) The divisions and sections of the Specifications and the identification of any drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

## 19. SCHEDULE OF THE WORK

- (a) **General:** The Contractor is responsible for the scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date established by the Contract and receive payment in accordance with Section 36 for the Work completed each period. However, the date established by the Contract Documents as the deadline for achieving Substantial Completion must be used in all schedules as the date on which Substantial Completion will be achieved. The time (in days) between the Contractor's planned early completion and the contracted Time for Completion is part of the Project "Total Float" time and will be used as such. Extensions of time pursuant to Sections 38 and 42, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Substantial Completion date planned by the Contractor.

Within two (2) weeks after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner, with a copy to the Architect/Engineer, a preliminary bar graph milestone schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary bar graph schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within seven (7) days of receipt by the Owner. A fully complete Project schedule for accomplishing the Work must be submitted and approved by the Owner prior to making application for the first payment.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, recovery schedule, updated schedule, plan of action, etc. shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor

shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner. Neither the second progress payment nor any subsequent payment shall be payable to the Contractor until it has submitted a fully complete Project schedule accepted by the Owner. Nor shall subsequent progress payments be payable to the Contractor unless and until he maintains the monthly bar graphs or status reports required by Section 19(e) herein or unless and until he provides any recovery schedule pursuant to Section 19(f) herein.

Failure to provide a satisfactory preliminary or fully complete Project schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 40 of these General Conditions.

The fully complete Project schedule for accomplishing the Work shall be of the type set forth in subparagraph (1) or (2) below, as appropriate:

- (1) For Contracts with a price of \$500,000 or less, a bar graph schedule will satisfy the above requirement. The schedule shall indicate the estimated starting and completion dates for each major element of the work. See (b) below.
- (2) For Contracts with a price over \$500,000, a Critical Path Method (CPM) schedule shall be utilized to control the planning and scheduling of the Work. The CPM schedule shall be the responsibility of the Contractor and shall be paid for by the Contractor. See (c) below.

- (b) **Bar Graph Schedule:** Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in his schedule for adverse weather anticipated in Section 6 and for the A/E to conduct whatever associated reviews or inspections as may be required under the A/E's contract with the Owner. If the A/E and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Architect/Engineer activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

- (c) **CPM Schedule:** Where a CPM schedule is required, it shall be in the time-scaled precedence format using the Contractor's logic and time estimates. The CPM schedule shall be drawn or plotted with activities grouped or zoned by Work area or subcontract as opposed to a random (or scattered) format.

The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail and logic which will schedule all salient features of the Work, including not only the actual construction Work for each trade, but also the submission of shop drawings and other Submittals for approval, approval of shop drawings by Architect/Engineer, placing of orders for materials, the manufacture and delivery of materials, the testing and installation of materials and equipment, and all Work activities to be performed by the Contractor. Failure to include any element of Work required for the performance of this Contract shall not excuse the Contractor from completing all Work required within the Time for Completion, Contract Completion Date and any interim deadlines established by the Contract.

The Contractor shall allow sufficient time in his schedule for adverse weather anticipated in Section 6 and for the A/E to conduct whatever associated reviews or inspections as may be required under the A/E's contract with the Owner. If the A/E and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Architect/Engineer activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

When completed, the CPM schedule shall be submitted to the Architect/Engineer and the Owner for review. The CPM schedule will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time, whether "free float" or "total float" as defined in Section 1, shall not be considered for the exclusive use or benefit of either the Owner or the Contractor, but must be allocated in the best interest of completing the Work within the Time for Completion or the Contract Completion Date. Extensions to the Time for Completion or the Contract Completion Date, when granted by Change Order, will be granted only when equitable time adjustment exceeds the Total Float in the activity or path of activities affected by the change. The CPM schedule shall also show what part of the Contract Price (expressed in U.S. dollars) is attributable to each activity on the schedule, the sum of which for all activities shall equal the total Contract Price. The CPM schedule shall also show the planned workforce (crew size and number of crews) and the major pieces of equipment required for each activity on the schedule. When acceptable to the Owner and Architect/Engineer as to compliance with the requirements of this Section, but not as to logic, the schedule shall become the CPM schedule for the Project. Acceptance of the schedule by the Owner does not indicate agreement with nor responsibility for the proposed or actual duration of any activity shown on the accepted schedule.

- (d) **Progress of Work:** The Contractor shall commence and complete the work in accordance with the approved schedule. Contractor acknowledges that it may be required to perform Work out of the sequence originally planned to maintain progress on the project. Contractor acknowledges that it has anticipated certain reasonable delays and disruptions as part of the contract price. No additional reimbursement will be forthcoming for out of sequence work. Time is of the essence. If the Contractor fails to employ sufficient competent personnel as may be required to perform the Work or otherwise causes delays which result in the Contractor's failure to complete the Work in the given time, the Contractor will indemnify and hold the Owner harmless for any additional expenses or

damages (including, but not limited to, liquidated damages) arising out of such delay or inability to proceed with the Work. Liquidated Damages, if any, shall be referenced in the Supplemental General Conditions.

- (e) **Monthly Project Reports:** The Contractor shall review progress not less than each month, but as often as necessary to properly manage the Project and stay on schedule. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the A/E along with his monthly request for payment a copy of the bar graph schedule annotated to show the current progress. For projects requiring a CPM schedule, the Contractor shall submit a monthly report of the status of all activities. The bar graph schedule or monthly status report submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; the manufacture, testing and installation of materials, supplies and equipment. The form shall be approved by the A/E and the Owner; however, a bar graph or a CPM schedule marked, colored or annotated to reflect the above will usually satisfy this requirement. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures he is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded.
- (f) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:
- (1) The Contractor' monthly progress report indicates delays that are, in the opinion of the A/E or the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question;
  - (2) The CPM schedule sorted by early finish shows the Contractor to be thirty (30) or more days behind the critical path schedule at any time during construction up to thirty (30) days prior to scheduled Substantial Completion date;
  - (3) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Architect/Engineer or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with the current accepted, fully completed, Project CPM schedule, as updated by approved change orders.

The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

If, in the opinion of the A/E or Owner, the recovery schedule is deemed insufficient, the Contractor, if directed by the Owner, will be required to remedy the schedule delay, without additional compensation, by one of the following manners:

- (1) Increased manpower by Contractor or its subcontractors;
  - (2) Increased number of shifts, including night and weekend work.
- (g) **Early Completion of Project:** The Contractor may attempt to achieve Substantial Completion on or before the Time for Completion or the Contract Completion Date. However, such planned early completion shall be for the Contractor's convenience only and shall not create any additional rights of the Contractor or obligations of the Owner under this Contract, nor shall it change the Time for Completion or the Contract Completion Date. The Contractor shall not be required to pay damages to the Owner because of its failure to achieve Substantial Completion by its planned earlier date. Likewise, the Owner shall not pay the Contractor any additional compensation for achieving Substantial Completion early nor will the Owner owe the Contractor any compensation should the Owner, its officers, employees, or agents cause the Contractor not to achieve Substantial Completion earlier than the date required by the Contract Documents.

If the Contractor seeks to change the Time for Completion or the Contract Completion Date to reflect an earlier completion date, he may request or propose such a change. The Owner may, but is not required to, accept such proposal. However, a change in the Time for Completion or the Contract Completion Date shall be accomplished only by Change Order. If the Contractor's proposal to change the Time for Completion or the Contract Completion Date is accepted, a Change Order will be issued stating that all references in the Contract, including these General Conditions, to the Time for Completion or the Contract Completion Date shall thereafter refer to the date as modified, and all rights and obligations, including the Contractor's liability for actual damages, delay damages and/or liquidated damages, shall be determined in relation to the date, as modified.

## 20. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

- (a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Architect/Engineer and the Owner, a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.

All requests for payment shall be made on the Schedule of Values and Certificate for Payment (Form AC-12) pages 1 and 2. Succeeding pages may be on the Form AC-12 continuation sheets or a computerized spreadsheet which is in the same format and which contains the same information.

- (b) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the Project, the quantities delivered, the Work completed, and the quantities stored on or off Site. Refer to Section 36 of these General Conditions for additional requirements associated with stored materials and/or equipment.

- (c) The “Value of Work Completed” portion of the Form AC-12 shall be completed, the Contractor’s certification completed and signed, and the appropriate substantiating material attached to each Certificate for Payment (AC-12). Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records, and similar materials which, in the opinion of the Owner and the A/E, are necessary or sufficient to justify payment of the amount requested.
- (d) The labor progress for any task or activity shall be calculated based upon the percentage of Work complete up to fifty percent (50%) of the completion of the task or activity. Thereafter, the evaluation of labor progress will be based upon the effort required to complete that task or activity. The material progress shall be calculated as the invoiced dollar cost of materials used in relationship to the amount estimated as necessary to complete a particular element of Work. When calculating material progress, credit shall be given for installed material as well as that stored on the Site and any material stored off Site which has been certified by the Architect/Engineer in accordance with Section 36 of these General Conditions.
- (e) Should Work included in previous Form AC-12 submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the “Value of Work Completed” portion of the first Form AC-12 submitted after such identification shall be modified to reduce the “completed” value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.
- (f) The Contractor shall not include Change Order work on the Form AC-12 until such time as the Contractor is in receipt of a fully executed Change Order from the Owner.

## **21. ACCESS TO WORK**

The Architect/Engineer, the Owner, the Project Manager, the Owner’s inspectors and other testing personnel, inspectors from the Department of Labor and Industry, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection.

## **22. SURVEYS AND LAYOUT**

- (a) The Owner shall furnish the Contractor all necessary documents showing property lines and the location of existing buildings and improvements. The Contractor shall provide competent surveying and engineering services to execute the Work in accordance with the Contract and shall be responsible for the accuracy of these surveying and engineering services.
- (b) Such general reference points and benchmarks on the Site as will enable the Contractor to proceed with the Work will be established in the plans and specifications. If the Contractor finds that any previously established reference points have been lost or destroyed, he shall promptly notify the Architect/Engineer.

- (c) The Contractor shall protect and preserve the established benchmarks and monuments and shall make no changes in locations without written notice to the Architect/Engineer and the written approval from the Owner. Any of these which may be lost or destroyed or which require shifting because of necessary changes in grades or locations shall, subject to prior written approval of the Owner, be replaced and accurately located by the Contractor.

## **23. PLANS AND SPECIFICATIONS**

- (a) The general character and scope of the Work are illustrated by the plans and the specifications. If the Contractor deems additional detail or information to be needed, he may request the same in writing from the Architect/Engineer. His request shall precisely state the detail or information needed and shall explain why it is needed. The Contractor shall also indicate a date when the requested information is required. The Architect/Engineer shall provide by Field Order such further detail and information as is necessary by the date required so long as the date indicated is reasonable. Any additional drawings and instructions supplied to the Contractor shall be consistent with the Contract Documents, shall be true developments thereof, and shall be so prepared that they can be reasonably interpreted as a part thereof. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.
- (b) If the Contractor finds a contract error, or other discrepancy in the plans or specifications, he shall notify the Architect/Engineer in writing as soon as possible, but before proceeding with the affected Work. The Architect/Engineer shall issue a clarification by Field Order to the Contractor stating the correct requirements. If the Contractor deems the Field Order requires additional Work, he shall notify the A/E of such prior to proceeding with that Work and he shall submit a request for Change Order along with a detailed substantiating cost proposal thru the A/E to the Owner within ten (10) calendar days.
- (c) In case of differences between small and large scale drawings, the large scale drawings shall govern. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work.
- (d) Where the word “similar” appears on the drawings, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- (e) The specifications may be divided into several parts, or sections, for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the Work among Subcontractors or to limit the Work performed by any trade. The Contractor shall be solely responsible for the coordination of the trades, Subcontractors and vendors engaged in the Work.
- (f) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Architect/Engineer shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

- (g) **As-Built Drawings:** The Contractor shall maintain at the Site for the Owner one copy of all drawings, specifications, addenda, approved shop or setting drawings, Change Orders and other modifications (collectively referred to herein as “As-Built Drawings”) in good order and marked to record all changes as they occur during construction. These shall be available to the Architect/Engineer, the Owner, the Project Inspector, the Owner’s other inspectors and to the Owner’s testing personnel. The drawings shall be neatly and clearly marked in color during construction to record all variations made during construction. The representation of such variations shall include such supplementary notes, symbols, legends, and details as may be necessary to clearly show the as-built construction. These As-Built Drawings are to be a separate set of drawings from the set of drawings used by the Contractor’s superintendent or supervisor for every day management of the project.
- (h) **Record Drawings:** Upon completion of the Work and prior to the final inspection, the Contractor shall deliver to the Architect/Engineer, for review and preparation of the Record Drawings, one complete set of “As-Built Drawings” referred to in the preceding subsection.
- (i) **Close-out and Operations and Maintenance Documents:** Upon completion of the Work and prior to final payment, the Contractor shall deliver to the Architect/Engineer, two complete hard copy sets of the Close-out and Operations and Maintenance Documents as specified in the Project Manual Specifications. Additionally, the Contractor will provide two CDs or other acceptably formatted electronic copy of the abovementioned documents to accompany the hard copy versions. The electronic version will be organized with folders and appropriate hierarchy as to represent the hard copy versions. The documentation found on the electronic version will be in PDF format, or other acceptable format as directed by the Owner.

## 24. SUBMITTALS

- (a) The Contractor shall submit a listing of all Submittals required by the Architect/Engineer or which the Contractor identifies as necessary, fixing the dates for the submission of shop or setting drawings, samples and product data. The listing shall be in a format acceptable to the Architect/Engineer. The Contractor shall identify all Submittals with the Owner’s Project Title as required by Section 2(f). There will be no payments to the Contractor until a listing of all Submittals is submitted and approved by the Architect/Engineer and Owner.
- (b) Submittals shall be forwarded to the Architect/Engineer for approval if required by the specifications or if requested by the Architect/Engineer or the Owner. No part of the Work dealt with by a Submittal shall be fabricated by the Contractor, save at his own risk, until such approval has been given.
- (c) The Contractor shall furnish to the Architect/Engineer for approval the name of the manufacturer, the model number, and other identifying data and information respecting the performance, capacity, nature and rating of the machinery and mechanical and other equipment which the Contractor contemplates incorporating in the Work. When Submittals are required by this Contract for materials, the Contractor shall furnish full information concerning the material or articles which he contemplates incorporating in the Work. When required, samples shall be submitted for approval at the Contractor’s expense, with all shipping charges prepaid. Machinery, equipment, material and articles installed or used without required approval shall be at the risk of subsequent rejection.

- (d) The Owner prefers and encourages the Contractor to submit all shop drawings to the Architect/Engineer electronically. However, shop drawings may be submitted in the form of six (6) blue line or black line prints. Catalog cuts, product data and other non-reproducible literature, except certificates, shall be submitted in six (6) copies minimum, of which three (3) will be retained by the Architect/Engineer and the remainder will be returned to the Contractor.
- (e) The Owner prefers and encourages the Contractor to submit all Submittals to the Architect/Engineer electronically. Submittals shall be accompanied by a letter of transmittal which shall list the Project Title, the Submittals included, the specification section number applicable to each, and the date shown on each Submittal. Submittals shall be complete in every respect and bound in sets if not submitted electronically. Each Submittal shall be clearly marked to show each item, component and/or optional feature proposed to be incorporated into the Project. Cross reference to the plans or specifications as needed to identify the use for which the item or component is intended.
- (f) The Contractor shall check the Submittals for compliance with the requirements of the Contract Documents. The Contractor shall clearly note in writing any and all items which deviate from the requirements of the Contract Documents. Reasons for deviation shall be included with the Submittal. The Contractor shall be solely responsible for checking all dimensions and coordinating all materials and trades to ensure that the components or products proposed, individually or in combination, will fit in the space available and that they will be compatible with other components or products provided.
- (g) After checking each submittal, the Contractor shall stamp each sheet of the Submittal with the Contractor's review stamp. Data submitted in a bound volume or on one sheet printed on two sides, may be stamped on the front of the first sheet only. The Contractor's review stamp shall be worded as follows:

The equipment and material shown and marked in this submittal is that proposed to be incorporated into this Project, is in compliance with the Contract drawings and specifications unless otherwise shown in bold face type or lettering and listed on a page or pages headed "DEPARTURES FROM DRAWINGS AND SPECIFICATIONS", and can be installed in the allocated spaces.

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

The person signing the review stamp shall be the person designated in writing by the Contractor as having that authority. (A copy of such designation shall be forwarded to the A/E prior to or with the first Submittal.) The signature on the stamped review statement shall be handwritten in ink, or in the case of electronic submittals, electronically signed in accordance with § 59.1-479 et seq. of the Code of Virginia. Stamped signatures are not acceptable.

- (h) The Contractor shall forward all Submittals sufficiently in advance of construction requirements to allow reasonable time for checking, correcting, resubmitting and rechecking.
- (i) If a Submittal indicates a departure from the Contract requirements, the Architect/Engineer may reject the Submittal or, if he deems it to have merit, may recommend it to the Owner, who shall approve or reject it as the Owner, in its sole discretion, sees fit. The departure from the Contract

requirements shall be further authorized by a Change Order, if a reduction or increase in the Contract Price is appropriate.

- (j) The Architect/Engineer is responsible to the Owner, but not to the Contractor, to verify that the Submittals conform to the design concept and functional requirements of the plans and specifications, that the detailed design portrayed in shop drawings and proposed equipment and materials shown in Submittals are of the quality specified and will function properly, and that the Submittals comply with the Contract Documents.
- (k) The Work shall be in accordance with approved Submittals. Approval of the Contractor's Submittals by the A/E does not relieve the Contractor from responsibility of complying with the Contract and all drawings and specifications, except as changed by Change Order.
- (l) The plans and/or specifications may indicate that the Architect/Engineer designed or detailed a portion of the plans around a particular product (most commonly a piece of equipment). Should a different product be proposed by the Contractor and accepted, all modifications, rerouting, relocations and variations required for proper installation and coordination to comply with the design concept and requirements of the Contract Documents shall be the responsibility of the Contractor and shall be made at no extra cost to the Owner. If the plans were noted as designed or detailed around a particular product and/or if a product is named when a "brand name or equal" specification has been used, this is not intended to favor or preclude the use of other products pursuant to Section 26 of these General Conditions. Rather such design merely acknowledges the reality that in many instances the Architect/Engineer must have a basis to design and detail around for dimensions and characteristics of a product or system.
- (m) Additional Submittal requirements may be shown in the specifications.

## **25. FEES, SERVICES AND FACILITIES**

- (a) The Contractor shall obtain all permits and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents.
- (b) Certain projects such as renovations and interior modifications of existing buildings will usually have water and electric service to the building. In those instances, water and electric power, if required for the Work under the Contract, will be furnished by the Owner subject to reasonable use by the Contractor, only to the extent and capacity of present services. The Contractor shall be responsible for providing required connections, temporary wiring, piping, etc. to these services in a safe manner and in accordance with applicable codes. All temporary wire, pipe, etc. shall be removed before the Substantial Completion inspection. Acceptance by the Contractor of the use of Owner's water and electricity constitutes a release to the Owner of all claims and of all liability to the Contractor for whatever damages which may result from power and water outages or voltage variations.
- (c) The Owner shall pay any connection charges for permanent utility connections directly to the utility Supplier. The Contractor shall coordinate such connections with the utility Supplier.

- (d) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor, either directly or through his Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of every nature whatsoever necessary to execute completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

## 26. EQUALS

- (a) **Brand names:** Unless otherwise stated in the specifications, the name of a certain brand, make or manufacturer denotes the characteristics, quality, workmanship, economy of operation and suitability for the intended purpose of the article desired, but does not restrict the Contractor to the specific brand, make, or manufacturer; it is set forth to convey to the Contractor the general style, type, character and quality of the article specified.
- (b) **Equal materials, equipment or assemblies:** Whenever in these Contract Documents, a particular brand, make of material, device or equipment is shown or specified, such brand, make of material, device or equipment shall be regarded merely as a standard. Any other brand, make or manufacturer of a product, assembly or equipment which in the opinion of the Architect/Engineer is the equal of that specified, considering quality, capabilities, workmanship, configuration, economy of operation, useful life, compatibility with design of the Work, and suitability for the intended purpose, will be accepted unless rejected by the Owner as not being equal.
- (c) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the Contract Documents but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. The Owner will have the A/E provide an initial evaluation of such proposed substitutes and provide a recommendation on acceptability and indicate the A/E's redesign fee to incorporate the substitution in the design. If the proposed substitute is acceptable to the Owner, a Change Order will be proposed to the Contractor to accept the substitute and to deduct the cost of the A/E redesign fee and the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.
- (d) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.

## 27. AVAILABILITY OF MATERIALS

If a brand name, product, or model number included in the Contract Documents is not available on the present market, alternate equal products or model numbers may be proposed by the Contractor through the Architect/Engineer for approval by the Owner. A letter from the manufacturer or representative of the manufacturer that states the specified brand name product or model number is no longer available is required.

## **28. CONTRACTOR'S TITLE TO MATERIALS**

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that he has clear and good title to all materials and supplies which he uses in the Work or for which he accepts payment in whole or in part.

## **29. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP**

- (a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new and in first class condition.
- (b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants (for example asbestos or lead paint). If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, he shall notify the Owner and the Architect/Engineer immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.
- (c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen. Poor or inferior workmanship (as determined by the Architect/Engineer, the Owner or other inspecting authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Architect/Engineer, the Owner, or other inspecting authority, as applicable.
- (d) Under the various sections of the plans or specifications, where specified items are supplied with the manufacturer's printed instructions, recommendations, or directions for installation, or where such instructions, recommendations, or directions are available, installation of the specified items shall be in strict accordance with the manufacturer's printed instructions unless those instructions contradict the plans or specifications, in which case the Architect/Engineer will be notified for an interpretation and decision.
- (e) Under the various sections of the plans or specifications, where reference is made to specific codes or standards governing the installation of specified items, installation shall in all cases be in strict accordance with the referenced codes and standards. Where no reference is made to specific codes or standards, installation shall conform to the generally recognized applicable standards for first-class installation of the specific item to be installed. Contractors are expected to be proficient and skilled in their respective trades and knowledgeable of the Codes and Standards of the National Fire Protection Association (NFPA), National Electric Code (NEC), Occupational Safety and Health Act (OSHA) and other codes and standards applicable to installations and associated work by his trade.

- (f) Where the manufacturer's printed instructions are not available for installation of specific items, where specific codes or standards are not referenced to govern the installation of specific items, or where there is uncertainty on the part of the Contractor concerning the installation procedures to be followed or the quality of workmanship to be maintained in the installation of specific items, the Contractor shall consult the Architect/Engineer for approval of the installation procedures or the specific standards governing the quality of workmanship the Contractor proposes to follow or maintain during the installation of the items in question.
  
- (g) During and/or at the completion of installation of any items, the tests designated in the plans or specifications necessary to assure proper and satisfactory functioning for its intended purpose shall be performed by the Contractor or by its Subcontractor responsible for the completed installation. All costs for such testing are to be included in the Contract Price. If required by the Contract Documents, the Contractor shall furnish prior to final inspection the manufacturers' certificates evidencing that products meet or exceed applicable performance, warranty and other requirements, and certificates that products have been properly installed and tested.

### **30. WARRANTY OF MATERIALS AND WORKMANSHIP**

- (a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new, in first class condition, and in accordance with the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with the Contract Documents and shall be performed by persons qualified at their respective trades.
- (b) Work not conforming to these warranties shall be considered defective.
- (c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's other guarantees or obligations in the Contract or under Virginia law.

### **31. USE OF SITE AND REMOVAL OF DEBRIS**

- (a) The Contractor shall:
  - (1) Perform the Work in such a manner as not to interrupt or interfere with the operation of any existing activity on, or in proximity to, the Site or with the Work of any other separate contractor;
  - (2) Store his apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of his Work or the work of any other separate contractor; and
  - (3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work.
- (b) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to effect all cutting, filling or patching of the Work required to make the same conform to the plans and specifications, and, except with the consent of the Architect/Engineer, not to cut or otherwise alter the Work of any other separate contractor. The Contractor shall not damage or endanger any portion of the Work or Site, including existing improvements, unless called for by the Contract.
- (c) The Contractor expressly undertakes, either directly or through his Subcontractor(s), to clean up frequently all refuse, rubbish, scrap materials and debris caused by his operations, to the end that at all times the Site shall present a neat, orderly and workmanlike appearance. No such refuse, rubbish, scrap material and debris shall be left within the completed Work nor buried on the building Site, but shall be removed from the Site and properly disposed of in a licensed landfill or otherwise as required by law.
- (d) The Contractor expressly undertakes, either directly or through his Subcontractor(s), before final payment or such prior time as the Owner may require, to remove all surplus material, false Work, temporary structures, including foundations thereof, plants of any description and debris of every nature resulting from his operations and to put the Site in a neat, orderly condition; to thoroughly clean and leave reasonably dust free all finished surfaces including all equipment, piping, etc., on the interior of all buildings included in the Contract; and to clean thoroughly all glass installed under the

Contract, including the removal of all paint and mortar splatters and other defacements. If the Contractor fails to clean up at the time required herein, the Owner may do so and charge the costs incurred thereby to the Contractor in accordance with Section 10(b) of these General Conditions.

- (e) The Contractor shall have, on-site, an employee certified by the Department of Conservation and Recreation as a Responsible Land Disturber who shall be responsible for the installation, inspection and maintenance of erosion control and stormwater management measures and devices. The Contractor shall prevent Site soil erosion, the runoff of silt and/or debris carrying water from the Site, and the blowing of debris off the Site in accordance with the applicable requirements and standards of the Contract, the County of Albemarle's Water Protection Ordinance, and any Virginia water protection ordinances/codes and/or stormwater regulations. This would include covering of dumpsters during periods of precipitation to prevent any runoff to the stormwater system.

### **32. TEMPORARY ROADS**

Temporary roads, if required, shall be established and maintained until permanent roads are accepted, then removed and the area restored to the conditions required by the Contract Documents. Crushed rock, paving and other road materials from temporary roads shall not be left on the Site unless permission is received from the Owner to bury the same at a location and depth approved by the Owner or leave in place as installed.

### **33. SIGNS**

The Contractor may, at his option and without cost to the Owner, erect signs acceptable to the Owner on the Site for the purpose of identifying and giving directions to the job. No signs shall be erected without prior approval of the Owner as to design and location. The Contractor shall pay all fees required by Albemarle County.

### **34. PROTECTION OF PERSONS AND PROPERTY**

- (a) The Contractor expressly undertakes, both directly and through his Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.
- (b) The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Any violation of these requirements or duties or any potential safety hazard that is brought to the attention of the Contractor by the Architect/Engineer, the Owner, or any other persons shall be immediately abated.
- (c) The provisions of all rules and regulations governing health and safety as adopted by the Safety Codes Commission of the Commonwealth of Virginia, issued by the Department of Labor and Industry under Title 40.1 of the Code of Virginia, shall apply to all Work under this Contract.

- (d) The Contractor shall continuously maintain adequate protection of all his Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by public authority, local conditions, or the Contract.
- (e) In an emergency affecting the health, safety or life of persons or of the Work, or of the adjoining property, the Contractor, without special instruction or authorization from the Architect/Engineer or the Owner, shall act, at his discretion, to prevent such threatened loss or injury. Also, should he, to prevent threatened loss or injury, be instructed or authorized to act by the Architect/Engineer or the Owner, he shall so act immediately, without appeal. Any additional compensation or extension of time claimed by the Contractor on account of any emergency work shall be determined as provided by Section 38 of these General Conditions.
- (f) When necessary for the proper protection of the Work, temporary heating, cooling, humidification, or de-humidification of a type approved by the Architect/Engineer must be provided by the Contractor, at the Contractor's expense, unless otherwise specified.

### **35. CLIMATIC CONDITIONS**

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions, including but not limited to, protection from precipitation, wind (including securing material and equipment that could become airborne), and extreme temperatures.

### **36. PAYMENTS TO CONTRACTOR**

- (a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment, Form AC-12, showing the estimate of the Work performed during the preceding calendar month or work period, as recommended by the Architect/Engineer. When evaluating the Contractor's Form AC-12, the Architect/Engineer will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the estimated value of the Work necessary to achieve Final Completion. The Architect/Engineer will schedule a monthly pay meeting. The Contractor will submit his monthly estimate of Work completed on Form AC-12 so that it is received by the Architect/Engineer and the Owner's Project Manager at least two work days prior to the date scheduled by the Architect/Engineer for the monthly pay meeting. The Owner will review the estimate with the Architect/Engineer and the Contractor at the monthly pay meeting, which shall be considered the receipt date, and may approve any or all of the estimate of Work for payment. In preparing estimates, the material delivered to the Site and preparatory Work done shall be taken into consideration, if properly documented as required by Section 20 of these General Conditions, or as may be required by the Architect/Engineer so that quantities may be verified. In addition to material delivered to the Site, material such as large pieces of equipment and items purchased specifically for the Project, but stored off the Site within the Commonwealth of Virginia, may be considered for payment, provided

all of the following are accomplished prior to the submission of the monthly payment request in which payment for such materials is requested:

- (1) The Contractor must notify the Owner in writing, at least ten (10) days prior to the submission of the payment request, through the Architect/Engineer, that specific items will be stored off Site in a designated, secured place within the Commonwealth of Virginia. The Schedule of Values must be detailed to indicate separately both the value of the material and the labor/installation for trades requesting payment for stored materials. By giving such notification and by requesting payment for material stored off Site, the Contractor warrants that the storage location is safe and suitable for the type of material stored and that the materials are identified as being the property of the Contractor, and agrees that loss of materials stored off the Site shall not relieve the Contractor of the obligation to timely furnish these types and quantities of materials for the Project and meet the Time for Completion or Contract Completion Date, subject to Section 42(b) of these General Conditions. If the storage location is more than 20 miles from the Site, the Contractor may be required to reimburse the Owner for the cost incurred for travel to the storage location to verify the Contractor's request for payment for materials stored off Site.
- (2) Such notification, as well as the payment request, shall:
  - (a) itemize the quantity of such materials and document with invoices showing the cost of said materials;
  - (b) indicate the identification markings used on the materials, which shall clearly reference the materials to the particular project;
  - (c) identify the specific location of the materials, which must be within reasonable proximity to the Site and within the Commonwealth of Virginia;
  - (d) include a letter from the Contractor's Surety which confirms that the Surety on the Performance Bond and the Labor and Material Payment Bond has been notified of the request for payment of materials stored off the Site and agrees that the materials are covered by the bond; and
  - (e) include a certificate of all-risk builder's risk insurance in an amount not less than the fair market value of the materials, which shall name the Owner and the Contractor as co-insured.
- (3) The Architect/Engineer shall indicate, in writing, to the Owner that Submittals for such materials have been reviewed and meet the requirements of the Contract Documents, that the stored materials meet the requirement of the plans and specifications, and that such materials conform to the approved Submittals. Should the A/E deem it necessary to visit the storage site to make such review, the Contractor shall bear the costs incurred therewith.
- (4) The Owner, through the Architect/Engineer, shall notify the Contractor in writing of its agreement to prepayment for materials.

- (5) The Contractor shall notify the Owner in writing, through the Architect/Engineer, when the materials are to be transferred to the Site and when the materials are received at the Site.
- (b) Payment will not be made for materials or equipment stored on or off the Site which are not scheduled for incorporation into the Work within the six months following submission of the request for payment, unless the Contractor has the prior consent of the Owner, which consent may be granted or withheld by the Owner in its discretion if, in the opinion of the Owner, it is not necessary to procure the materials more than six months in advance of use to assure their availability when needed.
- (c) In making such partial payments, five percent (5%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of the federal government. Such retainage shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all monies due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like. (§2.2-4333 of the Code of Virginia)
- (d) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work. Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.
- (e) The final payment, which shall include the retainage, less any amounts due to or claimed by the Owner, shall not become due until the Architect/Engineer and the Owner agree that Final Completion has been achieved and until the Contractor shall deliver to the Owner through the Architect/Engineer a Certificate of Completion by the Contractor (Form AC-13.2) and an Affidavit of Payment of Claims (Form AC-13), stating that all Subcontractors and Suppliers of either labor or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project less retainage. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(i), Section 16(a)-(d), Section 31(d), costs incurred to repair or replace Defective Work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible, delay damages under Section 42(h), and any liquidated or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims (Form AC-13), an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or Supplier pursuant to Section 37(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the monies due to the Contractor which is claimed by the Subcontractor or Supplier into a Virginia Court or Federal Court sitting in Virginia, in the manner provided by law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractor relationship between the Owner and any Subcontractor or Supplier, and the

Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof.

- (f) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of As-Built drawings, equipment manuals, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 36(e) of these General Conditions, the Architect/Engineer shall deliver the written Certificate of Completion by the Architect/Engineer (Form AC-13.1) to the Owner, with a copy to the Contractor, stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefor. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.
- (g) Unless there is a dispute about the compensation due to the Contractor, Defective Work, quality of the Work, compliance with the Contract Documents, completion itself, claims by the Owner, other matters in contention between the parties, or unless monies are withheld pursuant to Albemarle County's Debt Setoff Program, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment (Form AC-12) in proper form by the Architect/Engineer at the monthly pay meeting, which shall be considered the receipt date, the Owner shall pay to the Contractor the amount approved by the Architect/Engineer, less all prior payments and advances whatsoever to or for the account of the Contractor. In the case of final payment, the completed Affidavit of Payment of Claims (Form AC-13), the Certificate of Completion by the Contractor (Form AC-13.2) and the Certificate of Completion by the Architect/Engineer (Form AC-13.1) shall accompany the final Schedule of Values and Certificate for Payment (Form AC-12) which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. In the event of disputes, payment shall be mailed on or before the Payment Date for amounts and Work not in dispute, subject to any set offs claimed by the Owner, provided however, in instances where further appropriations are required by the County of Albemarle or where the issuance of further bonds is required, in which case, payment shall be made within thirty (30) days after the effective date of such appropriation or within thirty (30) days after the receipt of bond proceeds by the Owner. All prior estimates and payments including those relating to extra Work may be connected and adjusted in any payment and shall be corrected and adjusted in the final payment. In the event that any request for payment by the Contractor contains a defect or impropriety, the Owner shall notify the Contractor of any defect or impropriety which would prevent payment by the Payment Date, within five (5) days after receipt of the Schedule of Values and Certificate for Payment (Form AC-12) by the Owner from the Architect/Engineer.
- (h) Interest shall accrue on all amounts owed by the Owner to the Contractor which remain unpaid seven (7) days following the Payment Date. Said interest shall accrue at the discounted ninety-day U.S. Treasury bill rate as established by the Weekly Auction and as reported in the publication entitled The Wall Street Journal on the weekday following each such Weekly Auction. During the period of time when the amounts due to the Contractor remain unpaid following the seventh (7th) day after the Payment Date, the interest accruing shall fluctuate on a weekly basis and shall be that established by the immediately prior Weekly Auction. It shall be the responsibility of the Contractor to gather and substantiate the applicable weekly interest rates to the satisfaction of the Owner and to calculate to the satisfaction of the Owner the interest due. In no event shall the rate of interest charge exceed the rate of interest charged pursuant to §58.1-1812 of the Code of Virginia. No interest shall accrue on

retainage or when payment is delayed because of disagreement between the Owner and the Contractor regarding the quantity, quality or timeliness of the Work, including, but not limited to, compliance with Contract Documents or the accuracy of any Request for Payment received. This exception to the accrual of interest stated in the preceding sentence shall apply only to that portion of a delayed payment which is actually the subject of such a disagreement and shall apply only for the duration of such disagreement. Nothing contained herein shall be interpreted, however, to prevent the withholding of retainage to assure faithful performance of the Contract. These same provisions relating to payment of interest to the Contractor shall apply also to the computation and accrual of interest on any amounts due from the Contractor to the Owner for deductive change orders and to amounts due on any claims by the Owner. The date of mailing of any payment by the U.S. Mail is deemed to be the date of payment to the addressee.

- (i) The acceptance by the Contractor of the final payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work, except for things done or furnished which are the subject of unresolved claims for which the Contractor has filed a timely written notice of intent, provided a claim is submitted no later than sixty (60) days after final payment. Acceptance of any interest payment by the Contractor shall be a release of the Owner from claims by the Contractor for late payment.
- (j) No certificate for payment issued by the Architect/Engineer, and no payment, final or otherwise, no certificate of completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work or operate to release the Contractor or his Surety from any obligation under the Contract, the Standard Performance Bond and the Standard Labor and Material Payment Bond.

### **37. PAYMENTS BY CONTRACTOR (§2.2-4354, Code of Virginia)**

Under §2.2-4354, Code of Virginia, the Contractor is obligated to:

- a. This is a construction contract under the VPPA. Therefore, Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(1).
- b. Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(2-5).

### **38. CHANGES IN THE WORK**

- (a) The Owner may at any time, by written order utilizing the County of Albemarle Change Order Form AC-11, and without notice to the sureties, make changes in the Work which are within the general scope of the contract except that no change will be made which will increase the total Contract Price to an amount more than twenty-five percent (25%) in excess of the original Contract Price without notice to sureties. The Owner, at its discretion, may require the Contractor to provide evidence of current surety coverage based on approved changes in the work that result in a change in the total contract amount. At the time of the Preconstruction Meeting described in Section 49(b), the Contractor and the Owner shall advise each other of their designees authorized to accept and/or

approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions. The Contractor agrees and understands that the authority of the Owner's designee is limited by Virginia Code §2.2-4309 and any other applicable statute.

If the Contractor claims that any instructions given to him by the Architect/Engineer or by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, he shall give the Architect/Engineer and the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than fourteen (14) days after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than fourteen (14) days after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided herein, and any additional compensation shall be determined by one of the four (4) methods provided herein, as selected by the Owner. Except as otherwise specifically provided, no claims for extra Work shall be allowed unless timely notice, as required by this Section, is given by the Contractor and unless such Work is performed pursuant to written Change Order. In making any change, the charge or credit for the change shall be determined by one of the following methods as selected by the Owner:

- (1) **Fixed Price:** By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. By using the Estimate for Change Order Forms GC-1, SC-1, and SS-1, respectively, the Change Order shall be substantiated by documentation itemizing the estimated quantities and actual costs of all labor, materials and equipment required as well as any markup used. The price change shall include the Contractor's overhead and profit. See Subsections (d) and (e) below.
- (2) **Unit Price:** By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.
- (3) **Unilateral:** If the Owner and Contractor are unable to agree that an item of Work or service constitutes a change, or that Contractor is entitled to additional compensation and/or an extension of time for such item of Work or service, the Contractor, upon receipt of a Unilateral Change Order, signed by the Owner, will promptly proceed with and expeditiously perform and/or supply the item of Work or service. If the parties are unable to agree on the amount of adjustment or schedule, the Owner will provide written notification to the Contractor of the adjustment the Owner considers appropriate. Such adjustment will be effective subject to Contractor's right to submit a claim as provided in Section 46. Any claim for an adjustment of compensation or schedule, or in opposition to an adjustment imposed by the Owner, will be submitted to the Owner in writing within seven (7) days of commencement of the event giving rise to such claim. The Contractor will submit to the Owner, in writing, the amount of the claim with supporting data within thirty (30) days of completion of the services or termination of the event for which it claims an adjustment.

- (4) **Cost Reimbursement (Time and Materials):** In order to allow performance of services to proceed in a timely manner, the Owner may issue a written order for the Contractor to proceed with a change for additional work or service in anticipation of subsequently negotiating an agreeable adjustment of the Contractor's compensation and/or schedule. Upon completion of the Work, the Contractor, by using Estimate for Change Order Forms GC-1, SC-1, and SS-1, respectively, will present to the Owner, an accurate, itemized account of the cost of the change in the Work, including, but not limited to, the costs of labor, materials, equipment, and supplies; and to annotate a copy of the Project schedule to accurately show the status of the Work at the time this initial written order is issued, to show the start and finish of the changed Work, and the status of the Work when the changed Work is completed.

Except as otherwise may be agreed to in writing by the Owner, such costs shall not exceed those prevailing for the trades or crafts, materials, and equipment in the locality of the Project, may include only those items listed as allowable in Subsection 38(e), and shall not include any of the costs listed as not allowable in Subsection 38(f). The Owner shall be permitted, on a daily basis, to verify such records and may require such additional records as are necessary to determine the cost of the change to the Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall arrive at a cost for the Change Order Request, based on the records kept and the Contractor's allowance for overhead and profit as set forth in Subsections (d), (e) and (f) below, and such costs shall be incorporated into a Change Order. If agreement on the cost of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 46.

- (b) The Contractor shall review any Owner requested or directed change and shall respond in writing within fourteen (14) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon his Work, including any increase or decrease in the Contract time and Price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price.

The Owner shall review the Contractor's proposal and respond to the Contractor within thirty (30) days of receipt. If a change to the Contract Price and time for performance are agreed upon, both parties shall sign the Change Order. If the price and time are not agreed upon, the Owner may direct the Contractor to proceed under Subsection 38(a)(3) or 38(a)(4). Changes to the Contract time and/or Price shall be effective when signed by both parties, with the exception of a Unilateral Change Order that is only signed by the Owner.

- (c) In figuring changes, any instructions for measurement of quantities set forth in the Contract shall be followed.
- (d) The percentage for overhead and profit to be used in calculating both additive and deductive changes in the Work (other than changes covered by unit prices) shall not exceed the percentages for each category listed below. Said percentages for overhead and profit shall be applied only on the cost of the changed Work (i.e. difference in cost between original and revised Work):

- (1) If a Subcontractor does all or part of the changed Work, the Subcontractor's markup for overhead and profit on the Work it performs shall be a maximum of ten percent (10%). The Contractor's markup on the subcontractor's price shall be a maximum of ten percent (10%).
  - (2) If the Contractor does all or part of the changed Work, its markup for overhead and profit on the changed Work it performs shall be a maximum of ten percent (10%).
  - (3) If a Sub-subcontractor at any tier does all or part of the changed Work, the Sub-subcontractor's markup on that Work shall be a maximum of ten percent (10%). The markup of a sub-subcontractor's Work by the Contractor and all intervening tiers of Subcontractors shall not exceed a total of ten percent (10%).
  - (4) Where Work is deleted from the Contract prior to commencement of that Work without substitution of other similar Work, one hundred percent (100%) of the Contract Price attributable to that Work shall be deducted from the Contract Price including applicable overhead costs and profit. However, in the event that material Submittals have been approved and orders placed for said materials, a lesser amount, but in no case less than eighty percent (80%) of the Contract Price attributable to that Work, shall be deducted from the Contract Price. The credit to the Owner for reduced premiums on labor and material bonds and performance bonds shall in all cases be one hundred percent (100%).
- (e) Allowable costs for changes in the Work may include the following:
- (1) Labor costs for employees directly employed in the change in the Work, including actual salaries and wages plus the cost of payroll charges and fringe benefits and overtime premiums, if such premiums are explicitly authorized by the Owner. "Billable" or "loaded" labor or wage rates will not be accepted.
  - (2) Materials incorporated into the change to the Work, including costs of transportation and storage, if applicable. If applicable, all cash discounts shall accrue to the Contractor, unless the Owner deposits funds with the Contractor to make such payments, and all trade discounts, rebates, refunds, and returns from the sale of surplus materials shall accrue to the Owner.
  - (3) Equipment incorporated in the changed Work or equipment used directly in accomplishing the Work. If rented expressly for accomplishing the change in the Work, the cost shall be the rental rate according to the terms of the rental agreement, which the Owner shall have the right to approve. If owned by the Contractor, the costs shall be a reasonable price based upon the life expectancy of the equipment and the purchase price of the equipment. If applicable, transportation costs may be included.
  - (4) Costs of increases in premiums for the Standard Labor and Material Payment Bond and the Standard Performance Bond, provided coverage for the cost of the change in the Work results in such increased costs. At the Owner's request, the Contractor shall provide proof of his notification to the Surety of the change in the Work and of the Surety's agreement to include such change in its coverage. The cost of the increase in premium shall be an allowable cost but shall not be marked up.
  - (5) Contractor and Subcontractor overhead costs as set forth in Subsection (d) markups above.

- (6) If the change in the Work also changes the Time for Completion or Contract Completion Date by adding days to perform the Work, an itemized accounting of the following Site direct overhead expenses for the change to the time may be considered as allowable costs for compensation in addition to those shown above: The Site superintendent's prorata salary, temporary Site office trailer expense, and temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilet facilities. All other direct and indirect overhead expenses are considered covered by and included in the Subsection (d) markups above.
  - (7) Any other costs directly attributable to the change in the Work with the exception of those set forth below.
- (f) Allowable costs for changes in the Work shall not include the following:
- (1) Costs due to the negligence of the Contractor, any Subcontractor, Supplier, their employees or other persons for whom the Contractor is responsible, including, but not limited to, costs for the correction of Defective Work, for improper disposal of material, for equipment wrongly supplied, for delay in performing the Work, or for delay in obtaining materials or equipment.
  - (2) Home office expenses including payroll costs for the Contractor's officers, executives, administrators, project managers, accountants, counsel, engineers, timekeepers, estimators, clerks, and other similar administrative personnel employed by the Contractor, whether at the Site or in the Contractor's principal or branch office for general administration of the Work. These costs are deemed overhead included in the percentage markups allowable in Subsection (d) above.
  - (3) Home and field office expenses not itemized in Subsection 38(e)(6) above. Such items include, but are not limited to, expenses of Contractor's home and branch offices, Contractor's capital expenses, interest on Contractor's capital used for the Work, charges for delinquent payments, small tools, incidental job costs, meals, rent, utilities, telephone and office equipment, and other general overhead expenses.
- (g) All Change Orders must state that the Contract Time for Completion or Contract Completion Date is not changed or is either increased or decreased by a specific number of days. The old Time for Completion and, if changed, the new Time for Completion must be stated.

If the Contractor requests an extension to the Time for Completion or a later Contract Completion Date, he must provide written justification for the extension to the Architect/Engineer and to the Owner. The written justification must demonstrate an anticipated actual increase in the time required to complete the Work beyond that allowed by the Contract as adjusted by prior change orders or amendments to the Contract, not just an increase or decrease in the time needed to complete some portion of the total Work. When a CPM schedule is required by the Contract, no extension to the Time for Completion or Contract Completion Date shall be allowed unless, and then only to the extent that, the additional or changed Work increases the length of the critical path beyond the Time for Completion or Contract Completion Date. If approved, the increase in time required to complete the Work shall be added to the Time for Completion or Contract Completion Date.

The Owner may decrease, by Change Order, the Time for Completion or Contract Completion Date when an Owner-requested deletion from the Work results in a decrease in the actual time required to complete the Work as demonstrable on the Bar Graph Schedule or on the CPM Schedule, whichever is appropriate. The Contractor may submit a request to decrease, by Change Order, the Time for Completion or Contract Completion Date under the procedures and subject to the considerations set forth in Section 19(g). No request for such decrease shall be considered for approval unless the proposed shorter schedule is otherwise acceptable under Sections 19(b) or (c), whichever is applicable. The Change Order decreasing the Time for Completion or changing the Contract Completion Date must be signed by both the Owner and the Contractor.

With the exception of Change Orders under Subsection 38(a)(4), which shall arrive at a change to the Contract Price and any change to time using the procedures set forth therein, each Change Order shall include all time and monetary impacts of the change, whether the Change Order is considered alone or with all other changes during the course of the Project. Failure to include a change to time and Contract Price in Section 38(a)(1) or (2) Change Orders shall waive any change to the time and Contract Price unless the parties mutually agree in writing to postpone a determination of the change to time and price resulting from the Change Order. Such a determination may be postponed not more than forty-five (45) days to give the Contractor an opportunity to demonstrate a change in the time and price needed to complete the Work. During any such postponement, the Work shall proceed, unless the Owner agrees otherwise.

If at any time there is a delay in the critical path of the Work due to postponement, due to the Contractor's efforts to justify an extension of the time or an increase in the Contract Price, or due to the Contractor's refusal to proceed with any of the Work, pending agreement on a change in time or price, such delay and any Contractor costs resulting from it shall not serve as the basis for the extension of the Time for Completion or Contract Completion Date or for an increase in the Contract Price.

- (h) The acceptance by the Contractor of any payment made by the Owner under a Change Order shall be and operate as a release to the Owner of all claims by the Contractor and of all liability owing to the Contractor for all things done or furnished in connection with the Work described in the Change Order. The execution of any Change Order by the Owner shall not be an acceptance of any Work or materials not in accordance with the Contract Documents, nor shall it relieve the Contractor of responsibility for faulty materials or workmanship or operate to release the Contractor or his surety from any obligation arising under the Contract or the Standard Performance Bond or Standard Labor and Material Payment Bond.
- (i) Payments will not be made for any Work, labor or materials on a fixed price, unit price or Subsection 38(a)(4) basis until the Contractor has furnished the Owner documents, certified as true and correct by an authorized officer or agent of the Contractor, evidencing the cost of such Work, labor and materials. The Owner may require any or all of the following documentation to be provided by the Contractor:
  - (1) certified payroll records showing the name, classification, date, daily hours, total hours, rate, and extension for each laborer, foreman, supervisor or other worker;
  - (2) equipment type & model, dates, daily hours, total hours, rental rate or other specified rate, and extension for each unit of equipment;

- (3) invoices for materials showing quantities, prices, and extensions;
- (4) daily records of waste materials removed from the Site and/or fill materials imported to the Site;
- (5) certified measurements of over excavations, piling installed and similar work; and/or
- (6) transportation records for materials, including prices, loads, and extensions.

Requests for payment shall be accompanied and supported by invoices for all materials used and for all transportation charges claimed. If materials come from the Contractor's own stock, then an affidavit may be furnished, in lieu of invoices, certifying quantities, prices, etc. to support the actual cost.

### **39. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT**

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within sixty (60) days any sum certified by the Architect/Engineer when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon ten (10) calendar days written notice to the Owner and the Architect/Engineer, stop Work or terminate the contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. In no event shall termination of the Contract by the Contractor terminate the obligations of the Contractor's surety on its payment and performance bonds.

### **40. OWNER'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT FOR CAUSE**

- (a) If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Owner may stop work or terminate the Contract. If the Contractor should refuse or should repeatedly fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials and equipment, or if he should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if he should disregard laws, ordinances or the written instructions of the Architect/Engineer or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may stop work or terminate the Contract.
- (b) Prior to termination of the Contract, the Owner shall give the Contractor and his surety ten (10) calendar days written notice pursuant to Section 1 ("Notice") of these General Conditions, during which the Contractor and/or his surety may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said ten (10) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the ten (10) day notice period.

In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor and/or its surety that the basis for the termination will be remedied in a time and manner which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor and/or its surety has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further ten (10) day notice, by notifying the Contractor and his surety in writing of the termination. In no event shall termination for cause terminate the obligations of the Contractor's surety on its payment and performance bonds.

- (c) Upon termination of the Contract, the Owner shall take possession of the Site and of all materials, tools and equipment thereon and finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment. If the expense of finishing the Work, including compensation for additional managerial and administrative services, shall exceed the unpaid balance of the Contract Price, the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others.
- (d) If it should be judicially determined that the Owner improperly terminated this Contract for cause, then the termination shall be deemed to be a termination for the convenience of the Owner.
- (e) Termination of the Contract under this Section is in addition to and without prejudice to any other right or remedy of the Owner. Any actions by the Owner permitted herein shall not be deemed a waiver of any other right or remedy of the Owner under the Contract or under the law. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. The provisions of this Section shall survive termination of the Contract.

#### **41. TERMINATION BY OWNER FOR CONVENIENCE**

- (a) Owner may terminate this Contract, in whole or in part, at any time without cause upon giving the Contractor written notice of such termination pursuant to Section 1 ("Notice") of these General Conditions. Upon such termination, the Contractor shall immediately cease Work and remove from the Site all of its labor forces and such of its materials as Owner elects not to purchase or to assume in the manner hereinafter provided. Upon such termination, the Contractor shall take such steps as Owner may require to assign to the Owner the Contractor's interest in all Subcontracts and purchase orders designated by Owner. After all such steps have been taken to Owner's satisfaction, the Contractor shall receive as full compensation for termination and assignment the following:
  - (1) All amounts then otherwise due under the terms of this Contract;
  - (2) Amounts due for Work performed in accordance with the Contract subsequent to the latest approved Schedule of Values and Certificate for Payment (Form AC-12) through the date of termination;
  - (3) Reasonable compensation for the actual cost of demobilization incurred by the Contractor as a direct result of such termination. The Contractor shall not be entitled to any compensation or damages for lost profits or for any other type of contractual compensation or damages other

than those provided by the preceding sentence. Upon payment of the foregoing, Owner shall have no further obligations to Contractor of any nature.

- (b) In no event shall termination for the convenience of the Owner terminate the obligations of the Contractor's surety on its payment and performance bonds.

## **42. DAMAGES FOR DELAYS; EXTENSION OF TIME**

- (a) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees or any separate independent contractor of the Owner, and the act or omission is the result of or is necessitated by causes outside the Owner's control; or if the Contractor is delayed by strikes, fires, unusual delays in transportation or unavoidable casualties, or other causes outside the Owner's or Contractor's control, the Contractor shall give the Owner and Architect/Engineer written notice within five (5) days of the inception of the delay. The Owner shall extend the time for Substantial Completion or Final Completion, as the case may be, for the length of time that the Substantial Completion or Final Completion of the Work was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay. In the event a CPM schedule is required by the Contract, no extension of the time allowed for Substantial Completion shall be granted unless the Contractor demonstrates a delay in the critical path of the approved CPM schedule or approved bar graph schedule.
- (b) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees, due to causes within their control, or delayed by the Owner's separate, independent contractors, when such delay results from causes within the Owner's control, and the Contractor intends to seek additional compensation for damages, if any, caused by the delay, the Contractor shall inform the Owner and the Architect/Engineer immediately at the time of the occurrence giving rise to the delay by the fastest means available and shall give written notice no later than five (5) days after inception of the delay. The Contractor's notice to the Owner shall specify the nature of the delay claimed by the Contractor, the cause of the delay and the impact of the delay on the Contractor's Work schedule. The Owner shall then have five (5) days to respond to the Contractor's notice with a resolution, remedy or direction to alleviate the delay or with a notice rejecting the claim for delay alleged to be caused by the Owner or parties for whom the Owner is responsible. If the issue is not then resolved, the Contractor may submit a request for Change Order in accordance with Section 38 or submit a claim as provided for in Section 46. The Contractor shall only be entitled to additional compensation if the delay was unreasonable and was caused solely by acts or omissions of the Owner, its agents or employees, due to causes within their control, or was caused by the Owner's separate, independent contractor, when such delay resulted solely from causes within the Owner's control.
- (c) The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays caused by acts or omissions of the Contractor due to causes within his control, including, but not limited to, delays resulting from Defective Work including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from Defective Work or rejected work for which

corrective action must be determined before like work can proceed, or from incomplete, incorrect or unacceptable submittals or samples.

- (d) No extension of time or additional compensation, if applicable, will be granted for any delay unless the claimed delay directly affects the critical path of the approved CPM schedule or the schedule shown on the approved bar graph schedule, whichever is applicable, and any float has been consumed. No extension of time or additional compensation shall be given for a delay if the Contractor failed to give notice in the manner and within the time prescribed in Subsections (a) or (b) above, whichever applies. Furthermore, no extension of time or additional compensation shall be given for any delay unless a claim therefor is made in writing to the Owner, with a copy to the Architect/Engineer, within twenty (20) days of the end of the delay. The claim shall state the cause of the delay, the number of days of extension requested and any compensation requested by the Contractor. The Contractor shall report the termination of the delay to the Owner and Architect/Engineer not less than ten (10) days after such termination. Failure to give notice of either the inception or the termination of the cause of delay or failure to present a claim for extension of time and/or monetary compensation within the times prescribed shall constitute a waiver of any claim for extension or additional compensation based upon that cause.
- (e) Requests for compensation for delays pursuant to Subsection (b) above must be substantiated by itemized data and records clearly showing that the Work delayed was on the critical path of the **approved** CPM schedule or on the sequence of Work on the **approved** bar graph schedule, as modified, and that the additional costs incurred by the Contractor are directly attributable to the delay in the Work claimed. Furthermore, compensation for delay shall be calculated from the contractual Time for Completion or Contract Completion Date, as adjusted by Change Order, and shall not be calculated based on any early completion planned or scheduled by the Contractor, unless a Change Order has been executed pursuant to Section 19(g) changing the Time for Completion or the Contract Completion Date to reflect such early completion. See Section 19 for procedures for the Contractor to follow if he plans early completion of the Work and wishes to request a Change Order reflecting the early completion date.

If there is an extension in the Time for Completion or the Contract Completion Date and if the Contractor is entitled to compensation under Subsection 42(b), and where there is no change in the Work, an itemized accounting of the following direct Site overhead expenses will be considered as allowable costs to be used in determining the compensation due the Contractor:

Site superintendent prorata salary, temporary Site office expense, temporary Site facilities, and temporary Site utilities including basic telephone service, electricity, heat, water, and sanitary/toilets. A ten percent (10%) markup of these expenses will be allowed to compensate the Contractor for home office and other direct or indirect overhead expenses.

- (f) If the Contractor submits a claim for delay damages pursuant to Subsection 42(b) above, the Contractor shall be liable to the Owner for a percentage of all costs incurred by the Owner in investigating, analyzing, negotiating and litigating the claim, which percentage shall be equal to the percentage of the Contractor's total delay claim that is determined through litigation to be false or to have no basis in law or in fact. (§2.2-4335(C), Code of Virginia.)

- (g) Any change in the Contract Time for Completion or Contract Completion Date shall be accomplished only by issuance of a Change Order.
- (h) If the Contractor fails to complete the Work within the Time for Completion or the Contract Completion Date, the Contractor shall be liable to the Owner in the amounts set forth in the Supplemental General Conditions, if any, not as a penalty, but as fixed, agreed and liquidated damages for delay until the Work is substantially or finally completed as the case may be. If liquidated damages are not so fixed in the Supplemental General Conditions, the Contractor shall be liable for any and all actual damages sustained as a result of delay. In addition to damages for delay, whether liquidated or actual, the Contractor shall also be liable for any and all actual damages sustained by the Owner as a result of any other breach of the Contract, including, but not limited to, Defective Work and abandonment of the Contract.
- (i) If liquidated damages are provided by the Supplemental General Conditions, the following provisions apply:
  - (1) If the Work is not substantially complete by the Time for Completion or Contract Completion Date, the Contractor shall owe to the Owner, not as a penalty but as Step One liquidated damages, the sum stated in the Supplemental General Conditions for Step One liquidated damages for each and every partial or total calendar day of delay in Substantial Completion.
  - (2) Once the Work is substantially complete, the accrual of Step One liquidated damages shall cease and the Contractor shall have thirty (30) calendar days, unless otherwise specified in the Contract Documents, in which to achieve Final Completion of the Work.
  - (3) If Final Completion of the Work is not achieved on or before the thirtieth (30th) calendar day, or the date specified in the Contract Documents, after Substantial Completion, and if the Owner has not granted any extension of time, the Contractor shall owe to the Owner, not as a penalty but as Step Two liquidated damages, the sum stated in the Supplemental General Conditions as Step Two liquidated damages for each and every partial or total calendar day of delay in Final Completion.

#### **43. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION**

- (a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor (Form AC-13.2a), of the date when the Work or designated portion thereof, will be, in his opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least ten (10) days in advance of said date and shall be forwarded through the Architect/Engineer, who will attach his written endorsement as to whether or not he concurs with the Contractor's statement that the Work will be ready for inspection and testing on the date given. The Architect/Engineer's endorsement is a convenience to the Owner only and shall not relieve the Contractor of his responsibility in the matter nor shall the Architect/Engineer's endorsement be deemed to be evidence that the Work was substantially complete and ready for inspection and testing. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor, Owner and Architect/Engineer.

The inspection shall include a demonstration by the Contractor that all equipment, systems and operable components of the project function properly and in accordance with the Contract Documents. The Contractor shall furnish access for the inspection and testing as provided in Section 21 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a “punch list”, which must be finished and corrected to obtain Final Completion.

After successful completion of the testing and the Architect/Engineer determines that, in its opinion, the Work, either in whole or in part, is substantially complete, the Architect/Engineer shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Architect/Engineer (Form AC-13.1a), that the Work, or a specified portion thereof, is recommended to be declared substantially complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as substantially complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete.

- (b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor (Form AC-13.2), of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Architect/Engineer, who will attach his endorsement as to whether or not he concurs in the Contractor’s statement that the Work will be ready for inspection and testing on the date given. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, and the Owner has received all project close-out deliverables, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 36 of these General Conditions.
- (c) The Architect/Engineer shall conduct the inspections. The Owner may elect to have other persons of its choosing also participate in the inspections. If one or more Substantial or Final Completion reinspections are required, the Contractor shall reimburse the Owner for all costs of reinspection or, at the Owner’s option, the costs may be deducted from payments due to the Contractor.
- (d) A representative of the local Building Official will either be present at the Substantial and Final Completion inspections or otherwise inspect the completed Work and advise the Owner whether the Work meets the requirements of the applicable building code(s).
- (e) Approval of Work at or as a result of any inspection required herein shall not release the Contractor or his surety from responsibility for complying with the Contract.

#### **44. GUARANTEE OF WORK**

- (a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for one (1) year from the date of Final Completion of the entire Project by the Owner. Equipment and facilities which have seasonal limitations on their operation (e.g. heating or air conditioning units) shall be guaranteed for one (1) full year from the

date of seasonally appropriate tests and acceptance, in writing, by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.

- (b) Unless the Owner approves otherwise, the warranty period for new equipment shall begin with the contract substantial completion date, regardless of whether the Contractor has used said equipment in the performance, installation, or application of the Work.
- (c) If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner or Architect/Engineer which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:
  - (1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;
  - (2) Make good all damage to the structure or Site or equipment or contents thereof, which, in the opinion of the Owner or the Architect/Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract; and
  - (3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbance that results from fulfilling the provisions of this Section.
- (d) In any case, when in fulfilling the requirements of the Contract and this guarantee or any other guaranty or warranty, the Contractor disturbs any work performed by a separate contractor, he shall restore such work to a condition satisfactory to the Architect/Engineer and Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.
- (e) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected and the Contractor and his surety shall be liable for all expense incurred.
- (f) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.
- (g) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract or by law.
- (h) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Detective Work under Section 30. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which

his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under the Contract Documents.

- (i) In the event the Work of the Contractor is to be modified by another contractor, either before or after the Final Inspection provided by Section 43 of the General Conditions, the first Contractor shall remain responsible in all respects under this Section's Guarantee of Work and under any other warranties or guarantees, express or implied, applicable to or arising from this Contract or by law. However, the Contractor shall not be responsible for any defects in material or workmanship introduced by the contractor modifying his Work. The first Contractor and the contractor making the modifications shall each be solely responsible for his respective work. The contractor modifying the earlier Work shall be responsible for any damage to or defect introduced into the Work by his modification. If the first contractor claims that a subsequent contractor has introduced defects of materials and/or workmanship into his Work, it shall be the burden of the contractor making the claim to demonstrate clearly the nature and extent of such introduced defects and the other contractor's responsibility for those defects. Any contractor modifying the work of another shall have the same burden if he asserts that defects in his work were caused by the contractor whose work he is modifying.

**45. ASSIGNMENTS OF CONTRACTUAL OBLIGATIONS**

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any monies due or to become due to him hereunder, without the prior written consent of the Owner. No assignment shall relieve any party from its obligations under the Contract.

**46. CONTRACTUAL DISPUTES (§2.2-4363, Code of Virginia)**

Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after final payment; however, written notice of the Contractor’s intention to file such claim must be given at the time of the occurrence or beginning of the Work upon which the claim is based. The filing of a timely notice is a prerequisite to recovery under this Section. Although the Contractor may be required to submit certain classes of claims prior to final payment, and the Contractor is not prevented from filing claims during the pendency of the Work, the Owner shall not be obligated to render a final written decision on any claim until after final payment. All claims shall be submitted along with all practically available supporting evidence and documentation.

No written decision denying a claim or addressing issues related to the claim, if rendered prior to final payment, shall be considered a denial pursuant to this Section unless the written decision makes express reference to this Section and is signed by the Owner or his designee. The Contractor may not institute legal action prior to receipt of the Owner’s final written decision on the claim unless the Owner fails to render such a decision within ninety (90) days of submission of the claim or within ninety (90) days of final payment, whichever is later.

The decision of the Owner shall be final and conclusive unless the Contractor within six (6) months of the date of the final decision on a claim, initiates legal action as provided in §2.2-4364 of the Code of Virginia. Failure of the Owner to render a decision within 90 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Owner’s failure to render a decision within 90 days shall be the Contractor’s right to immediately institute legal action. No administrative appeals procedure pursuant to §2.2-4365 of the Code of Virginia has been established for contractual claims under this Contract. Venue for any litigation arising hereunder shall be in the Circuit Court for the County of Albemarle, Virginia.

**47. ASBESTOS**

- (a) This subsection applies to projects involving existing buildings where asbestos abatement is not a part of the Work, when the scope of the project has been reviewed and a comprehensive survey conducted by an individual licensed by the Virginia Department of Professional and Occupational Regulation to conduct building inspections for asbestos containing materials in buildings, and where the Owner has attempted to remove or encapsulate all asbestos containing material that may become friable or damaged during this Project.

Prior to commencement of Work, the results of the comprehensive survey or any other asbestos survey shall be made available to the Contractor, who shall be responsible for performing his Work

so as not to disturb any remaining asbestos, encapsulated or otherwise, identified in such survey or surveys.

If the Contractor discovers or inadvertently disturbs any material that he knows, should have known or has reason to believe, may contain asbestos that has not been previously identified, was overlooked during the removal, was deemed not to be friable or was encapsulated, the Contractor shall stop Work in the area containing or suspected to contain the asbestos, secure the area, and notify the Owner and the Architect/Engineer immediately by telephone or in person with written notice as soon as possible. The Owner will have the suspect material sampled.

If the sample is positive and must be disturbed in the course of the Work, the Owner shall have the material repaired or removed and shall pay for the bulk sample analysis.

Except as provided in §11-4.1 of the Code of Virginia, if the material disturbed is not within the Contractor's authorized Work and/or Work area or under this Contract, the Contractor shall pay for all associated sampling and abatement Costs.

- (b) If asbestos abatement is included as a part of the Work, the Contractor shall assure that the asbestos abatement work is accomplished by those duly licensed as described in Section 3 of these General Conditions and in accordance with the specific requirements of the Contract and all applicable laws and regulations.
- (c) If asbestos abatement is included as part of the Work, the licensed asbestos Subcontractor shall obtain the insurance required under Section 11(e) of these General Conditions.

#### **48. TRAINING, OPERATION AND MAINTENANCE OF EQUIPMENT**

- (a) As a part of the Work, the Contractor in conjunction with his Subcontractors and Suppliers shall provide the Owner's operations and maintenance personnel with adequate instruction and training in the proper operation and maintenance of any equipment, systems, and related controls provided or altered in the Work. The training requirements may be further defined in the specifications.
- (b) The Contractor shall provide the Owner with a minimum of two (2) copies of operating, maintenance and parts manuals for all equipment and systems provided in the Work. Further specific requirements may be indicated in the specifications.

#### **49. PROJECT MEETINGS**

- (a) The intention of this Section is that the Contractor, the Owner and the A/E have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner and its A/E are responsible for making a reasonable effort to provide timely responses to the Contractor.

(b) **Preconstruction Meeting:**

Prior to the start of construction and no later than 15 calendar days after the Notice to Proceed, a “Preconstruction” meeting shall be held with attendees to include the Owner’s Project Manager and Project Inspector, the Architect/Engineer’s project manager and representatives of each design discipline involved in the Project, the Contractor’s project manager and superintendent (and scheduler, if Contractor desires), and representatives of the Contractor’s major Subcontractors. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

- (1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority.
- (2) Names, addresses, telephone numbers, FAX numbers, and email addresses to be used for Requests for Information (RFI), Requests for Clarification (RFC), Requests for Proposals (RFP), shop drawings, submittals, and notices.
- (3) Contractor’s proposed construction schedule and Owner’s sequencing requirements, if any.
- (4) Schedule of Values and Certificate for Payment (Form AC-12) requirements and procedures.
- (5) Procedures for shop drawings, product data and Submittals.
- (6) Procedures for handling Field Orders and Change Order Form AC-11.
- (7) Procedures for Contractor’s request for time extension, if any.
- (8) Construction Site requirements, procedures and clarifications to include:
  - Manner of conducting the Work presentation to be done by members of the project team, preferably Contractor’s superintendent and project manager.
  - Site specialties such as dust and erosion control, stormwater management, project signs, clean up and housekeeping, temporary facilities, utilities, security, and traffic.
  - Safety.
  - Layout of the Work.
  - Quality control, testing, inspections and notices required.
  - Site visits by the A/E and others.
  - Owner’s Project Inspector duties.
  - Running Punch List.
  - As-Built Drawings.
- (9) Procedures and documentation of differing or unforeseen Site conditions.
- (10) Monthly Pay Meeting.
- (11) Project Close-Out requirements and procedures.
- (12) Project records.

(c) **Monthly Pay Meeting:**

Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner, A/E and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:

- Owner's Project Inspector.
- Contractor's project superintendent.
- A/E representative of each discipline where Work was performed for the current pay request or where Work is projected to be performed in the coming month.
- A representative of each subcontractor who performed work included in the current pay request.
- A representative of each subcontractor who is projected to perform work in the coming month.

The following topics should be included, as a minimum, in the monthly pay meeting:

- (1) Observations of status, quality and workmanship of Work in progress.
- (2) Validation of the Schedule of Values and Certificate for payment.
- (3) Conformance with proposed construction schedule.
- (4) Outstanding Requests for Information, Requests for Clarification and Requests for Proposal.
- (5) Submittals with action pending.
- (6) Status of pending Change Orders.
- (7) Status of Running Punch List items.
- (8) Work proposed for coming pay period.
- (9) Discussions of any problems or potential problems which need attention.

(d) **Other Meetings:**

Requirements for other meetings, such as progress meetings, coordination meetings, preinstallation meetings and/or partnering meetings, may be included in the Contract Documents.

\*\*\*\*\* END OF GENERAL CONDITIONS \*\*\*\*\*

## SUPPLEMENTAL GENERAL CONDITIONS

The COUNTY OF ALBEMARLE CONSTRUCTION CONTRACT GENERAL CONDITIONS (Revised May 2018) are modified and supplemented as hereinafter described.

1. Section 11(B) Contractor's and Subcontractor's Insurance: Insurance Requirements  
Give minimum dollar amounts for the following after consulting the above table and the Risk Manager. Items (a)-(d) must be included in all solicitations:
  - (a) Worker's Compensation: requires a minimum of **\$1,000,000**.
  - (b) General Liability: requires a minimum of **\$1,000,000**.
  - (c) Automobile Liability: requires a minimum of **\$1,000,000**.
  - (d) Umbrella Liability: requires a minimum of **\$1,000,000**.
  
  - (e) Environmental Pollution is not required by this solicitation.
  
  - (f) Professional Liability is not required by this solicitation.
  
  - (g) Cyber Liability is not required by this solicitation.
  
2. Section 12 – BUILDER'S RISK INSURANCE
  - (a) The requirements of this section of the General Conditions for builders risk insurance on the full value of the entire building are waived for this project. The Owner maintains insurance on the existing building (including fire, vandalism and extended coverage). **However, the Contractor shall provide builders risk insurance for the Work in an amount equal to one hundred percent (100%) of the Contract Price for the Work.** The loss, if any, is to be made adjustable with and payable to the Owner, in accordance with its interests, as they may appear. The Owner, its officers, employees and its agents, shall be named as loss payee in any policy of insurance issued. Written evidence of the insurance shall be filed with the Owner prior to execution of the Contract. In the event of cancellation of this insurance, not less than thirty (30) days prior written notice must be sent to the Owner. A copy of the policy of insurance shall be given to the Owner upon demand.
  
  - (b) Not used
  
  - (c) The Contractor is responsible for providing any desired coverage for Contractor's or Subcontractors' buildings, equipment, materials, tools or supplies that are on-site.
  
3. Section 42 - DAMAGES FOR DELAY, EXTENSION OF TIME  
Add the following paragraphs:
  - (j) It is imperative that the Work in this contract be substantially completed not later than August 11, 2023 to give time for the Owner to furnish and equip the facility and meet other contractual obligations. The Contractor represents and agrees that he has taken into account in his bid the requirements of the bid documents, the location, the time allowed for the Work, local conditions, availability of materials, equipment, and labor, and any other factors which may affect performance

of the Work. The Contractor agrees and warrants that he will achieve substantial completion of the Work not later than August 11, 2023.

- (1) Assuming timely execution of the Contract with applicable Bonds, Notice to Proceed will be given to the Contractor on or before June 10, 2023.
  
- (k) Subject to the provisions of the General Conditions allowing for extension of time allowed for completion of the Work, if the work is not substantially completed by the specified date, the Contractor shall owe to the Owner, not as a penalty but as liquidated damages, the sum of Five-hundred dollars (\$500) per day for each and every calendar day for delay in substantial completion of the Work beyond August 11, 2023. Likewise, if the Work is not finally completed by the specified date, the Contractor shall owe to the Owner, not as a penalty but as liquidated damages, the sum of Five-hundred dollars (\$500) per day for each and every calendar day of delay in final completion of the Work.
  
- (l) The Owner may withhold from the monthly Progress Payment, the current value of the liquidated damages. Failure of the Owner to withhold liquidated damages during ongoing operations that have exceeded the Contract Completion Date is not a waiver of the Owner's entitlement to damages as set forth in the Contract Documents.
  
- (m) Final accounting of liquidated damages will be administered through a deduction in the final amount owed the Contractor.

**School Special Conditions**

Provide the following for school projects

- 1) Written text: Information for the Project Manager to draft SC
  - a) pick-up and drop off hours, after school use, weekend use, school location, etc.
  - b) school calendar
  - c) see standard School Conditions pg. 2, attached (smoking, dress etc...)

Specs to include *Instruction to Bidders* to provide insurance **and documents to prove experience within 5 days of bid opening** ...or like words to be determined.

- 2) Drawing: "Construction Limits and Staging Area"
- 3) Drawing: emergency egress/fire drills etc.

**"Construction Limits and Staging Area" drawings**

- 1) access routes during construction, including fire drills & a real emergency route
- 2) fencing/barriers to define construction limits
- 3) protection of items to remain (trees, windows, etc...)
- 4) relocation of existing features (play equipment, sheds, etc.; by whom & to where);
- 5) removal of ex trees; (new pipe installation)
- 6) delivery and pick-up during construction:(kitchen deliveries, trash pick-up, etc)
- 7) Summer use:  
Summer school: none  
Parks and Rec. use of fields: TBD  
Administration: parking, trash pick-up, etc.
- 7a) Summer Projects:  
Coordinate with other renovation and maintenance projects at school
- 8) School Year Use:  
limitation of play areas for the year of construction  
clarify user needs: after school use and pick-up times;
- 9) Project Logistics; (phasing, demolition access, etc)

**SPECIAL CONDITIONS  
ALBEMARLE COUNTY PUBLIC SCHOOLS**

1. Worker Standards of Conduct/Dress – Hard hats, safety shoes, appropriate shirts and pants are required at all times. Smoking is prohibited on school property. There is to be no contact or harassment of any kind between workers, teachers and students. Only the project superintendent may contact the school staff if necessary. Violence, Swearing, Drugs, Alcohol, Firearms and Weapons are prohibited on school property. Any workers violating these standards of conduct shall be ordered off the site and not allowed to return.
2. Workers shall wear identification indicating the company that employs them while working in an occupied school, even during summer months.
3. Drawings and/or Specifications – Any Additional Instructions by Architect/Owner to explain drawing and specifications shall be binding on Contractor.
4. The Contractor (or his designated sub-contractor) shall obtain and pay the fees for all permits necessary for the construction of the project, unless specifically stated otherwise. The Owner will pay for the County Building Permit fees, and the Contractor shall obtain the permits. The Owner will pay for water and sewer connection fees, and the contractor shall obtain the permit. The Contractor shall pay for the tapping fee whether done by himself or pay the Service Authority to make tap. Fees for all bonds (excluding erosion control bonds) will be the sole responsibility of the Contractor. It is the responsibility of the Contractor to determine which permits are necessary. The Owner will pay for the permanent connection to franchised utility companies, electric service, and gas service. The Contractor shall coordinate and schedule all permanent utility service work.
5. Regarding asbestos work, the general contractor shall be responsible for submitting any required notices to all appropriate regulatory agencies, and shall do so within the required timeframe.
6. Contractor's staging area, protective barriers and safety fencing, employee parking, loading access and stockpiling of soils (*where applicable*) shall be as shown on the plans or as approved by Owner.
7. Contractor's staging area and general construction site shall be kept neat and clean so that grass is cut and debris and trash is removed on a weekly basis if not more frequently.
8. Safe access to the designated areas adjacent to the construction area must be maintained at all times for pedestrians and maintenance vehicles.
9. Liquidated Damages: Shall be in accordance with the Supplementary General Conditions.
10. Section 01200 Project Meetings and Section 01300 Submittals are to include the following:
  - 1) Bi-Monthly Job-Site meetings
  - 2) The Contractor's project superintendent shall provide the Architect and Owner with copies of his daily report on a weekly basis including manpower per trade, job progress, weather and activities.

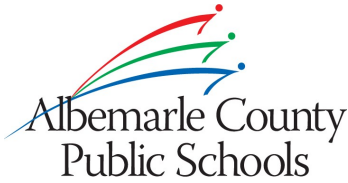
11. Application for Payment and payments shall be delayed when project is not in compliance with Erosion Control Plan, permits, or any related instructions given by Owner. Lack of Project Cleanliness may also delay payment. Weekly broom cleaning required for interior renovations.
12. The Contractor shall coordinate all construction operations and deliveries with the school activity schedule. If school is in session while construction is underway, deliveries to the construction site shall not be allowed between the hours **7:30 a.m.-8:30 a.m.** and **1:30 p.m. - 2:30 p.m.**
13. If school is in session while construction is underway, the Contractor shall allow for 5 days when work will be prohibited for student special testing in the school in the spring. These dates will be confirmed at the Pre-Construction meeting.
14. Contractors Work within the Existing and Functioning School Area shall be limited to when school is not in session (i.e. during summertime and/or after hours). Excessively noisy work or work producing noxious fumes adjacent to classrooms in session may also be subject to work after regular hours.
15. Hours of work will be limited for projects with exterior work areas, noisy loading or unloading, and work with close neighbors who could be adversely affected.
16. At the completion of the project and before the Final Application for Payment will be approved, Contractor shall provide the Owner written statement certifying that the work is asbestos free.
17. UL Labels are required on all electrical and mechanical equipment. If unlabeled equipment is delivered to the job site, Contractors shall remove and replace with properly labeled equipment or shall pay for UL field testing to properly label prior to payment being made such equipment.
18. Testing/Special Inspections - (*If included in the project scope*) Owner shall obtain and pay for testing and special inspections services. The Contractor shall pay for any required re-testing due to failed initial tests. Special Inspectors instructions shall be binding on the Contractor. Contractor shall call the testing company designated by the Owner and coordinate any special inspections. Contractor shall provide the Special Inspector with any necessary equipment, such as ladders, scaffolding, etc. for inspection purposes. At the completion of the project and before the Final Application for Payment will be approved, all deficiencies on any special inspection reports, shall be remedied.
19. Building Inspections Department – The Contractor shall call for inspections (*in accordance with the local department's procedures or by no later than 4 p.m. the day prior the inspection is requested*). Requests for fire alarm inspections require several days advance notice. Fire alarm inspection requests shall be made and coordinated by the Contractor with assistance of all related trades such as fire alarm, mechanical and automatic control system subcontractors. A successful dry run test must be made and witnessed by the Owner's representative before calling a County Inspection.
20. Retainage shall be 5%, and will not be reduced until the HVAC Testing and Balancing report is approved by Architect and Owner. (*Note this may require a delay to provide appropriate outside air temperatures for both heating and cooling tests.*) All Owner training, Owner manuals, spare parts and warranties are also to be received and approved by Architect and Owner and before retainage is released.
21. Building security is the responsibility of the Contractor until final acceptance.
22. The Contractor shall provide approved, framed, operating and maintenance instruction, wiring diagrams and control diagrams as applicable:

Sprinkler System	Fire Alarm System	Telecommunication System
Heating	Ventilating System	Sound System
Fans	Pumps	Motors
Generator	Energy Management	Other Alarms

Any other items or systems required but not specifically listed.

- 23. Constructor to provide comprehensive training and equipment demonstration for the Owner’s designated representatives and the Contractor shall schedule at least 2 weeks in advance for Owner’s coordination review and approval.
- 24. Fire Protection System (Fire Sprinkler) shop drawings and hydraulic calculations shall be prepared, certified and stamped by a professional engineer, licensed in the state of Virginia, at the Contractor’s expense.
- 25. Cleaning during construction: Areas of work shall be cleaned broom clean at least weekly to minimize tracking dirt; Owners existing equipment and facility shall be protected from dust, splash or splatter and cleaned or replaced to return to pre-construction conditions.
- 26. Final Cleaning to be performed to the Owner’s satisfaction. If unsatisfactory cleaning is not remedied within 24 hour written notice to Contractor from Owner, Owner shall complete and deduct from Contractor’s final payment.
- 27. Weather Days: shall be counted cumulatively for the project duration and agreed upon monthly in the pay meeting notes, never to shorten the duration.
- 28. Temporary Facilities:  
Power and Water is provided at the site, by Owner, so long as privilege is not abused.  
Contractor is to provide Temporary Toilet facility, do not use the restrooms.
- 29. Hazardous Materials: PCB or ACM materials may be found in window caulk, floor tiles, mastic behind display boards, mastic at piping insulation, science counter tops, and or window and canopy transit panels. Contractor to notify Owner if suspicious material is found on site, for *Owner* to coordinate removal.

\*\*\* END OF SPECIAL CONDITIONS \*\*\*



**CONTRACT #«number»**  
**«Company»**  
 «Address1»  
 «Address2»  
 «City», «State» «PostalCode»  
**«corporate status, as confirmed by SCC»**  
**(Contractor)**

<u>Project name: Murray</u> <u>Elementary School Casework</u> <u>Renovation</u>  <u>A/E, if applicable: Moseley</u> <u>Architects</u>  <u>A/E contract #: 623309</u> <u>Project Mgr: Jacqueline Hall</u>
--

**SCHOOL BOARD OF ALBEMARLE COUNTY, VIRGINIA,**  
 401 McIntire Rd.  
 Charlottesville, Virginia 22902  
**a body corporate under the laws of the Commonwealth of Virginia,**  
**(School Board or Owner)**

This Agreement (“Agreement” or “Contract”) made and entered into on this \_\_\_\_ day of \_\_\_\_\_, 2023, between the Contractor as identified above and the School Board (collectively, the Parties), hereby agree, in consideration of the mutual covenants and stipulations set forth below:

1. Scope of Work: The Contractor shall furnish all labor, equipment, and materials and perform all work for the project as described in the Invitation to Bid (IFB) #**2023-1005113**, p. IFB-1 and the Owner’s plans and specifications, including all work described in the Bid Form as Base Bid plus additives, (collectively, the Work) in strict accordance with the Contract Documents. In brief, the Contractor shall \_\_\_\_\_.
  
2. Incorporation of documents and Order of Precedence: To the extent that they do not conflict with the terms of this Agreement, the following documents are incorporated by reference in their entirety:
  - the Invitation to Bid, #**2023-1005113**;
  - the Bid Form submitted by the Contractor; (with Post Bid Modification if applicable)
  - the County of Albemarle Construction Contract General Conditions, as included in the IFB;
  - the Supplemental General Conditions, if any;
  - the Special Conditions attached to the Owner’s Invitation for Bids;
  - the Owner’s Project Plans and Specifications dated April 11, 2023; and modifications shown as Addenda \_\_\_\_\_; and
  - the Project Manual dated April 11, 2023 (which may include some or all of the above documents).

In the event that a conflict or ambiguity exists or is created between this Agreement, the IFB, and/or the Contractor’s submitted Bid Form, the terms of this Agreement first and the IFB second, if necessary, shall govern and supersede any such conflicting or ambiguous terms. The Supplemental General Conditions shall thereafter take precedence over the General Conditions.

3. Payment/Consideration Schedule: In consideration of the Work to be performed by Contractor, as set forth in the section entitled, “Scope of Work,” the School Board agrees to pay Contractor for completed and accepted work the total sum of \_\_\_\_\_ dollars (\$ \_\_\_\_\_) as calculated below:

Base bid:	\$ _____	
Additive 1:	\$ _____	for _____
Additive 2:	\$ _____	for _____

**Total:**           \$ \_\_\_\_\_

4. Term: The Work shall be commenced on a date to be specified in a written order of the Owner and shall be Substantially Completed within 59 calendar days. The Work shall be finally completed within 30 days after the date of Substantial Completion of the Work or no later than the date of Final Completion of September 10, 2023, whichever is sooner. Time is of the essence.
5. Non-Appropriation: The continuation of the terms, conditions, and provisions of this Agreement beyond June 30 (the end of the School Board's fiscal year) of any year, is subject to its approval and ratification by the School Board and appropriation by them of the necessary money to fund said contract for each succeeding year. If sufficient funds are not appropriated and budgeted in any fiscal year for payments due under this Agreement, the School Board shall immediately notify Contractor, and this Agreement shall terminate on the last day of the fiscal year for which appropriations were received without penalty or expense to the School Board of any kind whatsoever.
6. Preconditions to Obligation: The School Board shall not be obligated to purchase or pay for goods, services, or materials under this Agreement unless the School Board has ordered such goods, services, and/or materials and until the Contractor has delivered any ordered goods, services, and/or materials. The School Board may increase or decrease quantities of ordered goods, services, and materials as required and in its discretion.
7. Faith-based Organizations: The School Board does not discriminate against faith-based organizations in accordance with Code of Virginia §2.2-4343.1.
8. Nondiscrimination: Pursuant to Virginia Code §§ 2.2-4201 and 2.2-4311, during the performance of this Contract, Contractor agrees as follows:
  - A. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of Contractor. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this Nondiscrimination clause, including the names of all contracting agencies with which the Contractor has contracts over \$10,000;
  - B. Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that Contractor is an equal opportunity employer;
  - C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section; and
  - D. Contractor shall include the provisions of the foregoing paragraphs A, B, and C in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
9. Drug-Free Workplace: Pursuant to Virginia Code Section § 2.2-4312, during the performance of this Contract, Contractor agrees to:
  - A. Provide a drug-free workplace for Contractor's employees.
  - B. Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.
  - C. State in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.
  - D. Include the provisions of the foregoing clauses in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

10. Compliance with Immigration Laws: Contractor does not and shall not during the performance of this Agreement knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986, pursuant to Virginia Code §2.2-4311.1.
11. Compliance with All Laws: Contractor shall comply with all federal, state, and local statutes, ordinances, and regulations now in effect or hereafter adopted, in the performance of scope of work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional licenses and permits necessary for performance of this Agreement prior to the initiation of work.
12. Business Entity Registration. Pursuant to Virginia Code § 2.2-4311.2, Contractor shall be registered and authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. Contractor shall submit proof of a required registration to the School Board. Additionally, if required, Contractor shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50 of the Code of Virginia, to be revoked or canceled at any time during the term of the Agreement.
13. Business License Requirement: If Contractor is a business located in Albemarle County, Virginia or at any time during the performance of this Agreement obtains situs for purposes of business license taxes, it shall be unlawful for such business to conduct or engage in such business, trade, or occupation without having first obtained the proper license from the Albemarle County Department of Finance. Contractor covenants that it has a business license where one is required to perform this Agreement.
14. Non-Assignment: All of the conditions and provisions in this Agreement shall extend to and bind the legal representatives, successors and assigns of the respective parties. Neither party to the Agreement shall assign or transfer their interest in the contract without the prior written consent of the other, which shall not be unreasonably withheld.
15. Audit: The Contractor shall maintain full and accurate records with respect to all matters covered under the Agreement including, without limitation, accounting records, written policies and procedures, time records, telephone records, reproduction cost records, travel and living expense records and any other supporting evidence necessary to substantiate charges related to the Agreement. Contractor's records shall be open to inspection and subject to audit and/or reproduction, during normal working hours by the School Board and its employees, agents or authorized representatives to the extent necessary to adequately permit evaluation and verification of any invoices, payments, or claims submitted by Contractor pursuant to this Agreement. Such records subject to examination shall also include, without limitation, those allocations as they may apply to costs associated with the contract. The School Board's employees, agents, or authorized representatives shall have access to the Contractor's facilities, shall have access to all necessary records, and shall be provided adequate and appropriate workspace, in order to conduct audits in compliance with this paragraph.
16. Termination with Cause: In the event that Contractor shall for any reason or through any cause be in default of the terms of this Agreement, the School Board may give Contractor written notice of such default by certified mail/return receipt requested at the address set forth in Section 20 herein. Unless otherwise provided, Contractor shall have ten (10) days from the date such notice is mailed in which to cure the default. Upon failure of Contractor to cure the default, the School Board may immediately cancel and terminate this Agreement as of the mailing date of the default notice. Upon termination, Contractor shall withdraw its personnel and equipment, cease performance of any further work under the Agreement, and turn over to the School Board any work in process for which payment has been made. In the event of violations of law, safety or health standards and regulations, this Agreement may be immediately cancelled and terminated by the School Board, and provisions

herein with respect to opportunity to cure default shall not be applicable.

17. Termination without Cause: The School Board may at any time, and for any reason, terminate this Agreement by written notice to Contractor specifying the termination date, which shall be not less than thirty (30) days from the date such notice is mailed. In the event of such termination, Contractor shall be paid such amount as shall compensate Contractor for the work satisfactorily completed, and accepted by the School Board, at the time of termination. If the School Board terminates this Agreement without cause, Contractor shall withdraw its personnel and equipment, cease performance of any further work under this Agreement, and turn over to the School Board any work completed or in process for which payment has been made.
18. Choice of Laws and Venue: This Agreement shall be governed by the provisions hereof and by the laws of the Commonwealth of Virginia, excepting the law governing conflicts of laws. Disputes arising out of this Agreement shall be resolved in the courts of the Commonwealth of Virginia in and for Albemarle County.
19. Indemnification and Hold Harmless: Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor, its subcontractors, agents, or employees under or in connection with this Agreement or the performance or failure to perform any work required by this Agreement. Contractor shall indemnify and hold harmless the School Board and its agents, volunteers, servants, employees, and officials from and against any and all claims, losses, or expenses, including reasonable attorney's fees and litigation expenses suffered by any indemnified party or entity as the result of claims or suits due to, arising out of or in connection with (a) any and all such damages, real or alleged, (b) the violation of any law applicable to this Agreement, and (c) the performance of the work by Contractor or those for whom Contractor is legally liable. Upon written demand by the School Board, Contractor shall assume and defend at Contractor's sole expense any and all such suits or defense of claims made against the School Board, its agents, volunteers, servants, employees, or officials.
20. Notices: All notices and requests required or permitted hereunder shall be sent by United States certified mail, return receipt requested, and to be effective, shall be postmarked not later than the final date for giving of such notice, or such notices may be sent by commercial messenger service, in which event, to be effective, such notices shall be delivered to a commercial messenger service not later than the final date for giving such notice. Alternatively, notice can be sent electronically to the parties and email addresses listed below.

Notices for the School Board shall be addressed as follows:  
401 McIntire Rd.  
Charlottesville, VA 22902

With a copy to:  
Allison McNally  
Chief Procurement Officer  
401 McIntire Rd., Room 248  
Charlottesville, VA 22902  
[amcnally@albemarle.org](mailto:amcnally@albemarle.org)

Notices for Contractor shall be addressed as follows:

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

Such addresses may be changed at any time and from time to time by like written notice given by either party to the other.

21. Entire Agreement: This Agreement and the documents incorporated by reference and included expressly as Exhibits to this Agreement constitute the entire agreement between the Parties. This Agreement supersedes all prior written or oral agreements or proposals between the parties, regarding the subject matter of this Agreement. This Agreement may not be modified except in a writing signed by both parties that is expressly stated to be an amendment hereto.
22. Independent Contractor: Contractor shall be at all times an independent contractor and, as such, shall have and maintain complete control over all of its employees and operations. Neither Contractor nor anyone employed by it shall be, represent, act, purport to act, or be deemed to be an agent, representative, employee or servant of the School Board. Nothing in this section shall be deemed to absolve or otherwise limit the Contractor's liability and responsibility to safely and correctly perform its duties under this Agreement.
23. Waiver: No failure of the School Board to exercise any right or power given to it by law or by this Agreement or to insist upon strict compliance by Contractor with any of the provisions of this Agreement, and no custom or practice of the parties at variance with the terms hereof, shall constitute a waiver of the School Board's right to demand strict compliance with the terms of this Agreement.
24. Interpretation: Whenever the context hereof shall require, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.
25. Severability: The provisions of this Agreement shall be deemed to be severable, and should any one or more of such provisions be declared or adjudged to be invalid or unenforceable, the remaining provisions shall be unaffected thereby and shall remain in full force and effect.
26. Contract Claims by Contractor: Prompt knowledge by the School Board of an existing or impending claim for damages or other relief may alter the plans, scheduling, or other action of the School Board and/or result in mitigation or elimination of the effects of the claim. Therefore, a written statement providing the School Board with notice of the Contractor's intention to file a claim which (i) describes the act or omission by the School Board or its agents that the Contractor contends caused it damages or entitles it to other relief; and (ii) provides a description of the nature and amount of the claim. Such written statement shall be submitted to the Purchasing Office of the Albemarle County Department of Finance within 20 days of the time of the occurrence or beginning of the work upon which the claim is based; provided, however, if such damage is deemed certain in the opinion of the Contractor to result from its acting on an order from the School Board, it shall immediately take written exception to the order. For purposes of this provision, "claim" shall include, without limitation, any request for an increase in the Agreement price or time and any request for equitable adjustment. Submission of a notice of claim as specified shall be mandatory, and failure to submit such notice shall be a conclusive waiver to such claim for damages or other relief by the Contractor. Neither an oral notice or statement, nor an untimely notice or statement will be sufficient to satisfy the requirements herein. The School Board will review the claim and render a final decision in writing within thirty (30) days of receipt of Contractor's written request for a final decision. Such decision shall be final and binding to the fullest extent allowed by law.
27. Claims for Extra Compensation: If Contractor encounters work and services not included in this Agreement or any supplement thereto but which in the opinion of Contractor is necessary for the successful completion of the Agreement and requires extra compensation, Contractor shall, before it begins the work on which it bases its claim, promptly notify the Purchasing Office of the Albemarle County Department of Finance in writing of its intention to perform the work and to make claim for extra compensation. Notification by Contractor under the terms of this paragraph shall not be construed as proving the validity of the claim. No claim for extra compensation will be filed or considered unless notification is given as herein set forth. Upon notification, the School Board shall promptly review any claim for extra compensation. If a claim is accepted by the School Board, it shall be paid as extra work under the terms of a supplemental agreement executed by the parties *before such work is begun*. The amounts claimed as extra compensation by Contractor shall be separately itemized, become a part of the claim, and serve as documentation thereto. The amounts

itemized shall be in sufficient detail to enable the School Board to analyze the need for the extra work and the costs claimed for the work.

28. Payments to Subcontractors:
  - a. This is a construction contract under the VPPA. Therefore, Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(1).
  - b. Contractor shall pay all subcontractors in the manner provided in Virginia Code Section 2.2-4354(2-5).
  
29. Insurance: Contractor shall purchase and maintain, at its sole expense, and from a company or companies authorized to do business within the Commonwealth of Virginia, insurance policies protecting from claims which may arise out of or result from Contractor's performance or non-performance of services under this Contract or the performance or non-performance of services under this Contract by anyone directly or indirectly employed by Contractor or for whose acts it may be liable. Such policies shall remain in full force and effect at all times during the term of this Agreement and shall contain the types of coverages and minimum limits which are required by the Supplemental General Conditions, Special General Conditions, or General Conditions, which shall, for this provision "Insurance" only, take precedence (in order of precedence as listed here) over this Agreement and other documents incorporated by reference. A certificate of insurance conforming to the requirements of the Supplemental, Special, and General Conditions shall be submitted prior to the execution of this Agreement.
  
30. Payment/Performance Bonds: Contractor shall furnish to the School Board a payment bond and a performance bond on forms provided by the School Board in conformity with Virginia Code §§ 2.2-4337 and 2.2-4339 each payable to the School Board and each in the sum of the Agreement amount. The performance bond shall be conditioned upon the faithful performance of the Agreement in strict conformity with the terms and conditions of the Agreement, and the payment bond shall be conditioned upon the prompt payment for all such material furnished or labor supplied or performed in the prosecution of the Work. Each of the bonds shall be executed by one or more surety companies selected by Contractor which are licensed and legally authorized to conduct the business of insurance, including surety, within the Commonwealth of Virginia. The performance and payment bonds shall be amended if necessary, as determined by the School Board, to reflect changes to the scope of the Work created by Change Orders and any amendments to this Agreement.
  
31. School Contractor Certification: Pursuant to Virginia Code § 22.1-296.1, Contractor certifies by his signature below that any and all persons who will provide services for or on behalf of the Contractor on public school property have not been convicted of a felony; any offense involving the sexual molestation, physical or sexual abuse or rape of a child; or any offense for which registration is required as defined in Virginia Code § 9.1-902. This Certification shall be binding throughout the contract term and that it will provide immediate notice to the School Board of any event that renders this certification untrue.

Contractor hereby acknowledges that any person making a materially false statement regarding any such offense shall be guilty of a class 1 misdemeanor and, upon conviction, the fact of such conviction shall be grounds for the revocation of this Agreement and, when relevant, the revocation of any license required to provide such services.

[Signature Page Follows]

**SCHOOL BOARD ACCEPTANCE**  
**The School Board of Albemarle County, Virginia**

**CONTRACTOR'S ACCEPTANCE**  
**[Contractor]**

SIGNATURE \_\_\_\_\_

SIGNATURE \_\_\_\_\_

NAME (type/print) Allison McNally

NAME (type/print) \_\_\_\_\_

TITLE Chief Procurement Officer

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

DATE \_\_\_\_\_

**POST BID MODIFICATION**

**DATE:**

**PROJECT TITLE:**

**IFB NO.:**

**OWNER:**

**CONTRACTOR:**

As allowed by Section 12(c) of the Instructions to Bidders and by §2.2-4318, Code of Virginia, negotiations were conducted with the lowest responsive and responsible bidder, \_\_\_\_\_, hereinafter called the Contractor. The following clarifications, amendments, deletions, revisions, substitutions, and/or modifications to the Contract Documents were made along with corresponding adjustments in the Contractor’s bid amount for furnishing all labor and materials and performing all work necessary for construction of this project in accordance with the modified contract documents:

<b>Item</b>	<b>AMOUNT</b>
<b>TOTAL</b>	

**END OF POST BID MODIFICATION**

# STANDARD PERFORMANCE BOND FOR CONSTRUCTION CONTRACTS

**KNOW ALL BY THESE PRESENT:** That \_\_\_\_\_, the Contractor (“Principal”) whose principal place of business is located at \_\_\_\_\_ and \_\_\_\_\_ (“Surety”) are held and firmly bound unto the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, the Owner (“Obligee”) in the amount of \_\_\_\_\_ for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS,**

Principal has by written agreement dated \_\_\_\_\_, entered into a contract with Obligee for \_\_\_\_\_ which contract (the “Contract”) is by reference expressly made a part hereof;

**NOW THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that, if the Principal shall promptly and faithfully perform said Contract in strict conformity with the plans, specifications and conditions of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Provided, that any alterations which may be made in the terms of the Contract, or in the Work to be done under it, or the giving by the Obligee of any extension of the time for the performance of the Contract, or any other alterations, extensions or forbearance on the part of either or both of the Obligee or the Principal to the other shall not in any way release the Principal and the Surety, or either of them, their heirs, executors, administrators, successors or assigns from their liability hereunder, notice to the Surety of any such alterations, extension, or forbearance being hereby waived.

No action shall be brought on this bond unless brought within one year after: (a) completion of the Contract and all Work thereunder, including expiration of all warranties and guarantees, or (b) discovery of the defect or breach of warranty or guarantee if the action be for such.

The Surety represents to the Principal and to the Obligee that it is legally authorized to do business in the Commonwealth of Virginia.

**Signed and sealed** this \_\_\_\_\_ day of \_\_\_\_\_.

**PRINCIPAL**

\_\_\_\_\_

BY:

\_\_\_\_\_  
**(Please sign above and print name below)**

\_\_\_\_\_

TITLE:

\_\_\_\_\_

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE:

\_\_\_\_\_

**SURETY**

BY:

\_\_\_\_\_  
**(Please sign above and print name below)**

\_\_\_\_\_

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE:

\_\_\_\_\_

BOND NO.:

\_\_\_\_\_

ADDRESS OF SURETY'S HOME OFFICE:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# STANDARD LABOR AND MATERIAL PAYMENT BOND

**KNOW ALL BY THESE PRESENT:** That \_\_\_\_\_, the Contractor (“Principal”) whose principal place of business is located at \_\_\_\_\_ and \_\_\_\_\_ (“Surety”) are held and firmly bound unto the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, the Owner (“Obligee”) in the amount of \_\_\_\_\_ for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS,**

Principal has by written agreement dated \_\_\_\_\_, entered into a contract with Obligee for \_\_\_\_\_ which contract (the “Contract”) is by reference expressly made a part hereof;

**NOW THEREFORE, THE CONDITION OF THIS OBLIGATION** is such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for labor performed and material furnished in the prosecution of the Work provided for in the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

The Principal and Surety, jointly and severally, hereby agree with Obligee as follows:

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 for use in the performance of the Contract. A “subcontractor” of the Principal, for the purposes of this bond only, includes not only those subcontractors having a direct contractual relationship with the Principal, but also any other contractor who undertakes to participate in the Work which the Principal is to perform under the aforesaid Contract, whether there are one or more intervening subcontractors contractually positioned between it and the Principal (for example, a subcontractor). “Labor” and “material” shall include, but not be limited to, public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the work site.
2. Subject to the provisions of paragraph 3, any claimant who has performed labor or furnished material in accordance with the Contract documents in the prosecution of the Work provided in the Contract, who has not been paid in full therefor before the expiration of ninety (90) days after the day on which such claimant performed the last of such labor or furnished the last of such materials for which he claims payment, may bring an action on this bond to recover any amount due him for such labor or material, and may prosecute such action to final judgment

and have execution on the judgment. The Obligee need not be a party to such action and shall not be liable for the payment of any costs, fees or expenses of any such suit.

3. Any claimant who has a direct contractual relationship with any subcontractor of the Principal from whom the Principal has not required a subcontractor payment bond, but who has no contractual relationship, express or implied, with the Principal, may bring an action on this bond only if he has given written notice to the Principal within one hundred eighty (180) days from the day on which the claimant performed the last of the labor or furnished the last of the materials for which he claims payment, stating with substantial accuracy the amount claimed and the name of the person for whom the Work was performed or to whom the material was furnished. Notice to the Principal shall be served by registered or certified mail, postage prepaid, in an envelope addressed to the Principal at any place where his office is regularly maintained for the transaction of business. Claims for sums withheld as retainages with respect to labor performed or materials furnished shall not be subject to the time limitations stated in this paragraph 3.
4. No suit or action shall be commenced hereunder by any claimant;
  - a. Unless brought within one year after the day on which the person bringing such action last performed labor or last furnished or supplied materials, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, the limitation embodied within this bond shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
  - b. Other than in a Virginia court of competent jurisdiction, with venue as provided by statute, or in the United States District Court for the district in which the project, or any part thereof is situated.
5. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder.

**Signed and sealed** this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**PRINCIPAL**

\_\_\_\_\_

BY:

\_\_\_\_\_  
**(Please sign above and print name below)**

TITLE:

\_\_\_\_\_

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE:

\_\_\_\_\_

**SURETY**

BY:

\_\_\_\_\_  
**(Please sign above and print name below)**

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE:

\_\_\_\_\_

BOND NO.:

\_\_\_\_\_

ADDRESS OF SURETY'S HOME OFFICE:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# GENERAL CONTRACTOR ESTIMATE FOR CHANGE ORDER

**GC-1**

**IFB Number:** 
**General Contractor:**   
**Project:** 
**Change Description:**   
**Owner:** 
**COR/PCO #:**

GENERAL CONTRACTOR DIRECT COSTS												
Scope Description				Direct Labor				Direct Material		Direct Equipment		
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost	
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K	
1.01					0.00		\$0.00		\$0.00		\$0.00	
1.02					0.00		\$0.00		\$0.00		\$0.00	
1.03					0.00		\$0.00		\$0.00		\$0.00	
1.04					0.00		\$0.00		\$0.00		\$0.00	
1.05					0.00		\$0.00		\$0.00		\$0.00	
1.06					0.00		\$0.00		\$0.00		\$0.00	
1.07					0.00		\$0.00		\$0.00		\$0.00	
1.08					0.00		\$0.00		\$0.00		\$0.00	
1.09	<b>Subtotal from Estimate Continuation Sheets</b>						\$0.00		\$0.00		\$0.00	
1.97	<b>Subtotal (S/T) Direct Costs:</b>						<b>Subtotal Labor</b>	<b>\$0.00</b>	<b>Subtotal Mat'l</b>	<b>\$0.00</b>	<b>Subtotal Equip.</b>	<b>\$0.00</b>
1.98	<b>Taxes/Insurance:</b>		FICA, FUI, SUI, & Workmens' Comp. at <span style="background-color: yellow; display: inline-block; width: 50px; height: 15px;"></span>			% of Item 1.97H =	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00	
1.99	<b>Total Direct Costs</b>					<b>Total Labor</b>	<b>\$0.00</b>	<b>Total Mat'l</b>	<b>\$0.00</b>	<b>Total Equip.</b>	<b>\$0.00</b>	

SUBCONTRACT COSTS		
Item No.	Subcontractor Name (List totals from attached SC-1 forms)	Total Cost
A	B	C
2.01		
2.02		
2.03		
2.04		
2.05		
2.06		
2.07		
2.08		
2.09		
2.99	<b>Total Subcontract Costs</b>	<b>\$0.00</b>

SUMMARY		
Item No.	Description	Total Cost
3.01	Total Direct Labor Cost	Item 1.99H \$0.00
3.02	Total Direct Material Cost	Item 1.99J \$0.00
3.03	Total Equipment Cost	Item 1.99L \$0.00
3.04	Subtotal	3.01+3.02+3.03 \$0.00
3.05	Overhead and Profit	* 10% x Item 3.04 \$0.00
3.06	Subtotal	3.04+3.05 \$0.00
3.07	Subcontractor Cost	Item 2.99 \$0.00
3.08	GC Markup on Subcontractors	** 10% x Item 3.07 \$0.00
3.09	Subtotal	3.06+3.07+3.08 \$0.00
3.10	Additional Bond Cost	
3.99	<b>Total Change Order Cost</b>	<b>(3.09+3.10) \$0.00</b>

Submitted By

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

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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

I have reviewed the costs proposed and find them to be reasonable (as proposed) (as marked).

A/E Signature: \_\_\_\_\_

**Note:** Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.

\*Limited to 10% on self-performed work.

\*\*Limited to a total of 10%, shared (cumulative total) if multiple tier subs, on subcontracted work.

# SUBCONTRACTOR ESTIMATE FOR CHANGE ORDER

SC-1

IFB Number:   
 Project:   
 Owner:

General Contractor:   
 Subcontractor:   
 Subcontractor Trade:   
 COR/PCO #:

Change Description:

SUBCONTRACTOR DIRECT COSTS											
Scope Description				Direct Labor				Direct Material		Direct Equipment	
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K
1.01					0.00		\$0.00		\$0.00		\$0.00
1.02					0.00		\$0.00		\$0.00		\$0.00
1.03					0.00		\$0.00		\$0.00		\$0.00
1.04					0.00		\$0.00		\$0.00		\$0.00
1.05					0.00		\$0.00		\$0.00		\$0.00
1.06					0.00		\$0.00		\$0.00		\$0.00
1.07					0.00		\$0.00		\$0.00		\$0.00
1.08					0.00		\$0.00		\$0.00		\$0.00
1.09	<b>Subtotal from Estimate Continuation Sheets</b>						\$0.00		\$0.00		\$0.00
1.97	<b>Subtotal (S/T) Direct Costs:</b>					<b>Subtotal Labor</b>	<b>\$0.00</b>	<b>Subtotal Mat'l</b>	<b>\$0.00</b>	<b>Subtotal Equip.</b>	<b>\$0.00</b>
1.98	<b>Taxes/Insurance:</b>				FICA, FUI, SUI, & Workmens' Comp. at <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 40px; height: 15px;"></span>	% of Item 1.97H:	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00
1.99	<b>Total Direct Costs</b>					<b>Total Labor</b>	<b>\$0.00</b>	<b>Total Mat'l</b>	<b>\$0.00</b>	<b>Total Equip.</b>	<b>\$0.00</b>

SUB-SUBCONTRACT COSTS		
Item No.	Sub-Subcontractor Name (List totals from attached SS-1 forms)	Total Cost
A	B	C
2.01		
2.02		
2.03		
2.04		
2.05		
2.06		
2.99	<b>Total Sub-Subcontract Costs</b>	<b>\$0.00</b>

SUMMARY			
Item No.	Description		Total Cost
3.01	Total Direct Labor Cost	Item 1.99H	\$0.00
3.02	Total Direct Material Cost	Item 1.99J	\$0.00
3.03	Total Equipment Cost	Item 1.99L	\$0.00
3.04	Subtotal	3.01+3.02+3.03	\$0.00
3.05	Overhead and Profit	* 10% x Item 3.04	\$0.00
3.06	Total Subcontractor Cost	3.04+3.05	\$0.00
3.07	Sub-Subcontractor Cost **	Item 2.99	\$0.00
3.99	<b>S/C Cost Report'd to GC ***</b>	3.06+3.07	<b>\$0.00</b>

Submitted By

Name: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

**Note:** Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.

\* Limited to 10% on self-performed work.

\*\* Limited to a total of 10%, shared (cumulative total) if multiple tier subs, on subcontracted work. Total mark-up on subcontracted work is calculated on the GC-1 form.

\*\*\* The subcontractor cost carried forward to GC-1 form does not include mark-up on sub-subcontractor costs. This mark-up is calculated on the GC-1 form. The GC and its subcontractors shall establish how the mark-up is to be distributed among the various subcontractors involved in the work.



# SUB-SUBCONTRACTOR ESTIMATE FOR CHANGE ORDER

**SS-1**

IFB Number:   
 Project:   
 Owner:

General Contractor:   
 Subcontractor:   
 Sub-Subcontractor:  
 Sub-Subcontractor Trade:  
 COR/PCO #:

Change Description:

SUB-SUBCONTRACTOR DIRECT COSTS											
Scope Description				Direct Labor				Direct Material		Direct Equipment	
Item No.	Description	Quantity	Qty Units	Direct Labor Hours Per Unit	Total Direct Labor Labor Hours	Hourly Wage Rate, Excl. Taxes & Ins.	Total Labor Cost	Material Cost Per Unit	Total Material Cost	Equipment Cost Per Unit	Total Equipment Cost
A	B	C	D	E	F = C x E	G	H = F x G	I	J = C x I	K	L = C x K
1.01					0.00		\$0.00		\$0.00		\$0.00
1.02					0.00		\$0.00		\$0.00		\$0.00
1.03					0.00		\$0.00		\$0.00		\$0.00
1.04					0.00		\$0.00		\$0.00		\$0.00
1.05					0.00		\$0.00		\$0.00		\$0.00
1.06					0.00		\$0.00		\$0.00		\$0.00
1.07					0.00		\$0.00		\$0.00		\$0.00
1.08					0.00		\$0.00		\$0.00		\$0.00
1.09	<b>Subtotal from Estimate Continuation Sheets</b>						\$0.00		\$0.00		\$0.00
1.97	<b>Subtotal (S/T) Direct Costs:</b>					<b>Subtotal Labor</b>	<b>\$0.00</b>	<b>Subtotal Mat'l</b>	<b>\$0.00</b>	<b>Subtotal Equip.</b>	<b>\$0.00</b>
1.98	<b>Taxes/Insurance:</b> FICA, FUI, SUI, & Workmens' Comp. at <span style="background-color: yellow; display: inline-block; width: 60px; height: 15px;"></span>					% of Item 1.97H	\$0.00	Sales Tax @ 5.3%	\$0.00	Sales Tax @ 5.3%	\$0.00
1.99	<b>Total Direct Costs</b>					<b>Total Labor</b>	<b>\$0.00</b>	<b>Total Mat'l</b>	<b>\$0.00</b>	<b>Total Equip.</b>	<b>\$0.00</b>

SUMMARY		
Item No.	Description	Total Cost
3.01	Total Direct Labor Cost <span style="float: right;">Item 1.99H</span>	\$0.00
3.02	Total Direct Material Cost <span style="float: right;">Item 1.99J</span>	\$0.00
3.03	Total Equipment Cost <span style="float: right;">Item 1.99L</span>	\$0.00
3.04	Subtotal <span style="float: right;">3.01+3.02+3.03</span>	\$0.00
3.05	Overhead and Profit <span style="float: right;">* 10% x Item 3.04</span>	\$0.00
3.99	<b>Total Sub-Subcontractor</b>	<b>\$0.00</b>

Submitted By

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

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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

**Note:** Mark-up is capped in conformance with the provisions of Section 38(d) of the Construction Contract General Conditions.  
 \*Limited to 10% on self-performed work.

## **FORM AC-12**

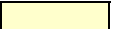
### **SCHEDULE OF VALUES and CERTIFICATE FOR PAYMENT**

Before using this Excel form, please read the following:

#### **Macro Security must be set to "Medium" !**

Check the Excel macro security settings, by picking **Tools**, **Macro**, and **Security** from the main Excel menu. If macro security is set at "High" or "Very High", change it to "Medium" and then immediately close Excel. When Excel is reopened, the new macro security setting will take effect. If you get a message to "Enable" or "Disable" macros, pick "Enable".  
( Excel/Office 2007 users may need to save this as a "Macro-Enabled Worksheet". )

#### **Users may ...**

Users may add, edit, and delete data in the those cells which are highlighted in yellow. (e.g.,  )  
Users may insert rows by using the **Insert New Row** button only!  
Users may format cells (e.g., bold, underline, italic, font size, etc.)  
Users may format rows (e.g., adjust the row height, etc.)

#### **Users should not ...**

Users should not modify these worksheets in any manner, other than as noted above !  
Users should not "unprotect" these worksheets !  
Users should not delete rows in these worksheets !  
Users should not enter data directly into any cells which are not highlighted in yellow.

Doing any of the above "should not" actions can compromise the integrity of the AC-12 worksheet by overwriting or deleting data and/or formulas. It is not the responsibility of the County of Albemarle staff to help correct worksheets which have been corrupted by users not heeding the above warnings.

**FORM AC-12**  
**SCHEDULE OF VALUES and CERTIFICATE FOR PAYMENT**

**MAIN MENU and GENERAL INSTRUCTIONS**

[Click here to read an important message before proceeding.](#)

**Step**

1. **Make a backup copy of this Excel file before proceeding to the next step.**

[Retainage questions, click here.](#)

2. **Enter project and contract information.**

3. **Prep the AC-12 form for new pay period.**

New users, please review the instructions below before completing Parts B & C.

4. **Complete AC-12, PART B.**

**View Instructions**

5. **Complete AC-12, PART C.**

**View Instructions**

6. **Review AC-12, PART A.**

7. **Print the AC-12.**

8. **Save each monthly submittal with a unique file name.**  
( for example: Project 999-99999 Pay Request 1, Project 999-99999 Pay Request 2, .... )

9. **Sign and submit the AC-12.**

---

**NEXT MONTH** - Repeat Steps 1 through 9.

---

## STEP 2 - Enter Project and Contract Information

### A ) Enter the following:

IFB/Contract Number:	
Project Title:	
Owner	County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia
Location of Work:	
A/E Firm Name:	
Contractor Name:	
Contractor FEIN:	

( FEIN = Fed. Employer Identification Number )

### Date Contract Executed

Month:	
Day:	
Year:	

**NOTE:** Once the above project and contract information have been entered, unless there are any changes, STEP 2 can be bypassed on future monthly updates.

### B )

## STEP 3 - Prepare the AC-12 for New Pay Period

**WARNING:** Run the Initialize Macro only once before beginning each new monthly pay request. See the explanation below.

Today is: 7/27/2022

**A)** **NOTE:** This form was last initialized on: 8/24/2007

**B) Update the following data:**

Pay Request Number:

For Pay Period Beginning:

For Pay Period Ending:

Pay Request Submittal Date:

Contractor Representative:

Retainage Percentage:

Retainage is initially set at the default value of 5%. With the Owner's PRE-APPROVAL, the retainage percentage may be adjusted. DO NOT ADJUST the retainage value UNTIL AFTER the INITIALIZE macro is run. For the final pay request, adjust this to 0%.

**C)**

**Initializing Explained ---- what it does and how it works:**

Initializing is designed to save the user considerable time and effort.

Initializing the AC-12 Form runs a macro (an automated procedure) which prepares the AC-12 for data entry for each new pay application. The macro copies all of the data from the "Current Value to Date" column to the "Previous Value to Date" column as shown in the example below.

This step must be done to compute the correct values for the current pay request.

**Example:**

	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE
		PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE	
Before initializing:	\$ 100.00	\$ 20.00	\$ 10.00	\$ 30.00	30%
After initializing:	\$ 100.00	\$ 30.00	\$ -	\$ 30.00	30%
After updating %:	\$ 100.00	\$ 30.00	\$ 20.00	\$ 50.00	50%

Cells with a yellow background allow data input by the user.

Cells with a white background are calculated cells. These cells are "locked" to prevent the user from accidentally overwriting the embedded formulas.

- a** The **"Initialize"** macro copies all "Current Value to Date" entries to the "Previous Value to Date" column.
- b** After the initializing macro is run, you can now update the "Percent Complete" column to reflect new progress.
- c** After updating the "Percent Complete" column, the new "Current Value to Date" amount is calculated by a formula which multiplies the "Percent Complete" by the "Total Value".
- d** Another formula calculates the "Value This Report" amount by subtracting the "Previous Value to Date" amount from the "Current Value to Date" amount.

<b>FORM AC-12</b>	<b>SCHEDULE OF VALUES</b> and <b>CERTIFICATE FOR PAYMENT</b>	<b>PAYMENT REQUEST NO.</b>	<b>1</b>
<b>PART A</b> <b>SUMMARY AND CERTIFICATION</b>		<b>PERIOD BEGINNING DATE:</b>	01/00/1900
		<b>PERIOD ENDING DATE:</b>	01/00/1900



**IFB NUMBER:** 0  
**OWNER NAME:** County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia  
**PROJECT TITLE:** 0

	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE
		PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE	
	A	B	C	D = B + C	E = D / A
Original Contract Line Items (from AC-12, PART B)	\$ -	\$ -	\$ -	\$ -	0%
Approved Change Orders (from AC-12, PART C)	\$ -	\$ -	\$ -	\$ -	0%
<b>ADJUSTED CONTRACT TOTAL</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>
Retainage <i>Retainage Percentage: 5.0%</i>		\$ -	\$ -	\$ -	
<b>NET REQUISITION AMOUNT</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

*Amount Requested*

**CONTRACTOR CERTIFICATION**

The undersigned Contractor requests payment of that portion of the contract price shown on the last line of the foregoing Schedule of Values, and represents and warrants to the Owner that: (1) the data shown on the Schedule of Values is accurate and correct; (2) the Work covered by this Certificate has been completed in accordance with the Contract Documents; (3) all previous progress payments received from Owner on account of Work done under this Contract have been applied to discharge in full (except for allowable retainage) all obligations of Contractor incurred in connection with Work covered by prior Certificates for Payment ( N/A for Payment No. 1 ) ; (4) title to all materials and equipment for which payment is requested in this Certificate, whether or not incorporated in said Work, will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such materials and equipment which are covered by a Bond previously accepted by Owner).

**FEIN #:** 0

**Contractor:** 0

**Date:** January 0, 1900

**By:** \_\_\_\_\_  
*signature*

**Typed Name:** 0

**ARCHITECT/ENGINEER CERTIFICATION**

This is to certify that, in accordance with the terms of a contract for IFB/Contract Number executed the day of , , by and between, the Contractor, and the County of Albemarle, Virginia and/or The County School Board of Albemarle County, Virginia, the Owner, for work at , there is due to the Contractor the amount of No Dollars and No Cents \$ .00

**Architect/Engineer:**

**By:** \_\_\_\_\_  
*signature* *printed name* *date*

**OWNER ACTION**

**Recommended for Payment:** \_\_\_\_\_  
Project Manager Date



ITEM NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
	Do not insert rows below this point !	\$ -	\$ -	\$ -	\$ -	0%	
<b>TOTAL ORIGINAL CONTRACT</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>0%</b>	



CHNG ORD. NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
		\$ -	\$ -	\$ -	\$ -	0%	
	Do not insert rows below this point !	\$ -	\$ -	\$ -	\$ -	0%	
<b>TOTAL APPROVED CHANGE ORDERS</b>		\$ -	\$ -	\$ -	\$ -	<b>0%</b>	

**STEP 7 - Print the AC-12**

## PART B Instructions

The **ORIGINAL CONTRACT** line items ( and progress for same ) are entered in PART B of the AC-12 form.  
 Below is an example PART B with detailed instructions shown in red.  
 ( Scroll down this page to view the step-by-step instructions. )

ITEM NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		
1		\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter a unique line item number for each line item. ( Examples: 1, 2, 3..... 1A, 1B, 1C..... 100, 200, 300..... 100.1, 100.2, 100.3. )</p>							
1	EPDM Roofing	\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter a line item description. ( Line items must be broken out in a sufficient level of detail to allow Owner and A/E to assess progress. )</p>							
<p style="color: red;">If payment will be sought for material stored off-site, labor and material must be entered on separate lines.</p>							
100 L	Structural Steel - Installation	\$ -	\$ -	\$ -	\$ -	0%	
100 M	Structural Steel - Materials	\$ -	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Enter the original contract value for each line item.</p>							
100 L	Structural Steel - Installation	\$ 5,675.00	\$ -	\$ -	\$ -	0%	
<p style="color: red;">Do not enter data in these three columns. (These values are computed by worksheet formulas. )</p>							
500	Pave Parking Lot A	\$ 30,000.00	\$ 5,000.00	\$ 10,000.00	\$ 15,000.00	50%	
<p style="color: red;">Enter the total progress (percent complete) for each line item.</p>							
500	Pave Parking Lot B	\$ 50,000.00	\$ 10,000.00	\$ 27,500.00	\$ 37,500.00	75%	
<p style="color: red;">Add notes or comments for a particular item if additional information/explanation is necessary or desired</p>							
500	Pave Parking Lot C	\$ 30,000.00	\$ 10,000.00	\$ 8,000.00	\$ 18,000.00	60%	PCO for time extension due to weather

CHNG ORD. NO.	ITEM DESCRIPTION	TOTAL VALUE	VALUE OF WORK COMPLETED			PERCENT COMPLETE	NOTES / COMMENTS
			PREVIOUS VALUE TO DATE	VALUE THIS REPORT	CURRENT VALUE TO DATE		

Enter the Change Order Number. ( Examples: 1, 2, 3.....). Additional identifying numbers and/or letters may be added as shown in examples below as needed.

1a	ADDITIONAL LANDSCAPING - Additional trees and shrubs	\$ 6,000.00	\$ -	\$ -	\$ -	0%	
1b	ADDITIONAL LANDSCAPING - Extend irrigation system	\$ 4,000.00	\$ -	\$ -	\$ -	0%	

If necessary to provide more detail for a specific Change Order, use multiple lines for each component as needed.

3	EPDM Roofing	\$ -	\$ -	\$ -	\$ -	0%	
---	--------------	------	------	------	------	----	--

Enter a Change Order description. ( Line items must be broken out in a sufficient level of detail to allow Owner and A/E to assess progress. )

**AFFIDAVIT OF PAYMENT OF CLAIMS**

**By:**

This day \_\_\_\_\_ personally appeared before me, \_\_\_\_\_, a Notary Public in and for the City/County of \_\_\_\_\_, \_\_\_\_\_ and, being by me first duly sworn, states that all subcontractors and suppliers of labor and materials have been paid all sums due them for work performed or materials furnished in the performance of the Contract between the County of Albemarle, Virginia, and/or The School Board of Albemarle County, Virginia, Owner, and \_\_\_\_\_, Contractor, dated \_\_\_\_\_, 20\_\_\_\_, for the construction of \_\_\_\_\_, \_\_\_\_\_, or arrangements have been made by the Contractor satisfactory to such subcontractors and suppliers with respect to payments of such sums as may be due them by the Contractor.

\_\_\_\_\_  
(Contractor Name)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

**ARCHITECT/ENGINEER'S CERTIFICATE OF SUBSTANTIAL COMPLETION**

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

County of Albemarle, Virginia, and/or  
The School Board of Albemarle County, Virginia  
c/o Facilities & Environmental Services – Facilities Planning & Construction Division  
401 McIntire Road  
Charlottesville, Virginia 22902-4596

**Project Title:** \_\_\_\_\_

**RFQ/Contract No.:** \_\_\_\_\_

In accordance with the requirements of the Contract Between Owner and Architect/Engineer and based upon the knowledge gained in the performance of the architectural/engineering services provided in said Contract and the reports of the Owner's Inspection and Testing entities, the undersigned Architect/Engineer states that the following portions of the project named above are substantially complete in accordance with the requirements of the Contract Documents and are recommended for use of their intended purpose (*indicate portions which are ready for use and, if applicable, occupancy*):

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

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the substantially completed portions of the project and the Owner has been provided with a copy of each report, except for the following:

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

A tentative list of unfinished Work and defective Work, referred to as the "punch list," is attached hereto. The list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by the Contractor within \_\_\_\_\_ days of the above date of Substantial Completion.

\_\_\_\_\_  
(A/E Firm Name)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Attachment: Punch List

**CERTIFICATE OF FINAL COMPLETION BY ARCHITECT/ENGINEER**

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

County of Albemarle, Virginia, and/or  
The School Board of Albemarle County, Virginia  
c/o Facilities & Environmental Services – Facilities Planning & Construction Division  
401 McIntire Road  
Charlottesville, Virginia 22902-4596

**Project Title:** \_\_\_\_\_

**RFQ/Contract No.:** \_\_\_\_\_

In accordance with the requirements of the Contract Between the Owner and the Architect/Engineer for Professional Services and based upon the knowledge gained in the performance of the services required in said Agreement, the undersigned hereby states that the above named project was fully completed in accordance with the requirements of the Contract Documents on \_\_\_\_\_ (Month) \_\_\_\_\_ (Day), \_\_\_\_\_ (Year).

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed and the Owner has been provided with a copy of each report.

Final as-built drawings have been prepared by the Architect/Engineer and submitted to the Owner in accordance with the requirements of the Contract Documents. The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents.

\_\_\_\_\_  
(A/E Firm Name)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

**CERTIFICATE OF PARTIAL OR SUBSTANTIAL COMPLETION BY CONTRACTOR**

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

County of Albemarle, Virginia, and/or  
The School Board of Albemarle County, Virginia  
c/o Facilities & Environmental Services – Facilities Planning & Construction Division  
401 McIntire Road  
Charlottesville, Virginia 22902-4596

**Project Title:** \_\_\_\_\_

**RFQ/Contract No.:** \_\_\_\_\_

In accordance with the requirements of the Agreement between the Owner and the Contractor, the undersigned Contractor hereby states that portions of the above named project are substantially completed in accordance with the requirements of the Contract Documents as modified by approved change orders. Those portions of the project now substantially complete are:

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

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the substantially completed portions of the project and the Owner has been provided with a copy of each report.

As-built marked up prints of the substantially completed portions of the project have been provided to the Architect/Engineer as required by the Contract Documents.

The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents with respect to the completed portions of the project, except as follows:

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

All training, operating instructions and maintenance manuals required by the Contract Documents have been provided to the Owner, except as follows:

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

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR’S obligation to complete the Work in accordance with the Contract Documents.

\_\_\_\_\_  
(Contractor Name)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

**CERTIFICATE OF FINAL COMPLETION BY CONTRACTOR**

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

County of Albemarle, Virginia, and/or  
The School Board of Albemarle County, Virginia  
c/o Facilities & Environmental Services – Facilities Planning & Construction Division  
401 McIntire Road  
Charlottesville, Virginia 22902-4596

**Project Title:** \_\_\_\_\_

**RFQ/Contract No.:** \_\_\_\_\_

In accordance with the requirements of the Contract Between Owner and Contractor (Form AC-9) the undersigned Contractor hereby states that the above named project has been fully completed in accordance with the requirements of the Contract Documents as modified by approved change orders.

All applicable tests, certificates and regulatory inspections required by the Contract Documents and any local, state or federal regulations have been performed with respect to the completed project and the Owner has been provided with a copy of each report.

As-built marked up prints of the completed project have been provided to the Architect/Engineer as required by the Contract Documents.

The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents.

All training, operating instructions and maintenance manuals required by the Contract Documents have been provided to the Owner.

\_\_\_\_\_  
(Contractor Name)

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Copy: Architect/Engineer

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

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

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Murray Elementary School; Casework Replacement.
1. Project Location: 3251 Morgantown Rd, Charlottesville, VA 22903.
- B. Owner: Albemarle County School Board.
1. Owner's Representative: Sheila Hoopmann [shoopmann@k12albemarle.org](mailto:shoopmann@k12albemarle.org); County of Albemarle Facilities Planning & Construction Division.
- C. Architect: Moseley Architects of Harrisonburg, Virginia.
- D. The Work consists of the following:
- The Work includes approximately 50 lf of casework demolition and replacement and 700 sf of VCT demolition and replacement within the existing school.
- E. Use of Professional Seals on Bidding, Procurement, and Contract Documents: For the purposes of this paragraph, the term "Regulant" refers to the individual who signs and seals parts of the Contract Documents (e.g. the Drawings and Specifications). Certain information has been excerpted verbatim from a source or sources (e.g., UL Assemblies, SMACNA details, IBC code text) which was considered or used by Regulant in preparing parts of the Contract Documents, as follows:
1. The excerpted information was neither prepared under the direct control nor personal supervision nor created by the Regulant, as it was prepared by the source and owner of the excerpted information.
  2. For purposes of bidding, procuring, and performance of the Work, and in any event of conflicts or ambiguities between the excerpted information in the Contract Documents and the requirements of applicable codes and standards, provide the better quality or greater quantity of Work which, at a minimum, complies with the requirements of the applicable codes and standards.
  3. Advise Architect immediately upon becoming aware of requirements of the Work which are not consistent with the requirements of the excerpted information.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

4. Attribution is acknowledged for information obtained and included herein verbatim from other source or sources.
5. Regulant has taken into consideration and used certain excerpted information from other sources which are applicable to the Contract Documents, and the Regulant indicates by its seal that it is assuming responsibility for its services in use and application of the excerpted information to the requirements of Work, but not for the excerpted information itself which was prepared by others. Regulant does not indicate by its seal that it is responsible for use or application of other information in such source or sources which was not included herein.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.5 USE OF PREMISES

- A. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- C. Use of Site: Limit use of premises to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  1. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
  2. Driveways and Entrances: Keep driveways, loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- D. Clean all construction vehicles and motorized equipment on site so dirt and mud are not carried onto Owner's roads, parking lots and off-site public roadways. Keep on-site roads and parking lots and if necessary, off-site roadways cleaned of all dirt and mud, on a daily basis.
- E. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
  1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
  2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
  3. Before partial Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.
  4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal business working hours of 7 a.m. to 6 p.m., Monday through Friday, except as otherwise indicated.
1. Weekend and Early Morning Hours: As approved in writing by the Owner.
  2. Hours for Core Drilling and Utility Shutdowns: As approved in writing by the Owner.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Owner not less than two days in advance of proposed utility interruptions.
  2. Do not proceed with utility interruptions without Owner's written permission.

1.8 ASBESTOS STATEMENT:

- A. No asbestos-containing materials (ACMs) shall be permitted. To the best of the Architect's knowledge, no ACMs are indicated for use in construction of this Project. Certify, in writing, that no asbestos-containing materials have been included in the Project.

1.9 GENERAL REQUIREMENTS:

- A. It is required that the Contractor and all Subcontractors carefully phase the work to permit orderly flow of vehicular traffic during construction.
- B. Construction site access, isolation of construction operations, safety measures, and other issues will be coordinated and clarified at Pre-construction conference as outlined in the Contract Documents.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- C. Provide security measures to protect the existing building and site construction areas during the entire contract period. Any damage to the existing buildings or surrounding site construction areas due to lack of security shall be repaired or replaced by the General Contractor to the satisfaction of the Owner and at no additional cost to the Owner. No increase in the completion time(s) will be allowed for any security-related problems.
- D. Coordinate and schedule security measures with the Owner.
- E. Provide self-contained toilet units in the exterior staging area. The Owner's interior building toilet facilities shall be "off-limits" to all construction personnel.
- F. After hours and week-end work shall be coordinated in advance with the Owner.
- G. Verify all existing grades, lines, levels, and horizontal and vertical dimensions, prior to commencing construction operations. Report any errors or inconsistencies to the Architect BEFORE beginning any work on this project.

1.10 DRAWINGS AND SPECIFICATIONS

- A. Provide all indicated or required equipment and materials with all features normally provided with items, although all features of design and construction may not be indicated in complete details. Include all standard features and appurtenances normally provided and/or required for safe operation.
- B. The Contractor shall be responsible for including all items and parts of the Work, as defined by requirements of the Contract Documents. Unless the Contract Documents specifically designate an item of part of the Work that is to be provided by a Subcontractor, then it is the sole responsibility of the Contractor to determine and allocate/assign the performance of each item or part of the Work. The Contractor shall not be entitled to any compensation or adjustment of time or to any other Claim due to any provision of the Contract Documents which assigns or allocates, or fails to assign or allocate, the performance of any item or part of the Work to any specific Subcontractor of Contractor. In no event shall the Contractor be entitled to request an interpretation or decision by, or any determination or instruction from, the Architect concerning or about any assignment or allocation of parts of the Work. The Architect will not be responsible to arbitrate or otherwise resolve any dispute or differences about such allocation or assignment between Contractor and any Subcontractors.
- C. "Summary" and "Related Sections" provisions in the Specifications, if any are stated or referred to in any Specification, are provided only for general reference and for convenience, and do not limit or alter in any way the requirements for the provision of the Work in the Contract Documents. Items or parts of the Work, and related provisions of the Contract Documents, even though not listed or stated in any Summary or Related Section provision, but which are indicated elsewhere in the Contract Documents, shall be included in the Work. Even though a Summary or Related Section may not refer to, state, or list each and every part of the Contract Documents which may include provisions about a specific item or part of the Work, all of the other applicable provisions of the Contract Documents remain in full force and effect, and shall be included in determining the requirements for the Work.

1.11 CLEANING AND PROTECTION:

- A. General:

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
2. Supervise construction activities to ensure 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. Retain stored items in orderly arrangement allowing maximum access, not impeding traffic or drainage.
4. Do not allow accumulation of scrap, debris, waste material, other items not required for construction of this work.
5. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
6. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to place designated for their storage.
2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements to meet requirements of subparagraph above.
3. Maintain the site in a neat, orderly condition at all times.

C. Structures:

1. Weekly, and more often if necessary, inspect each structure and pick up all scrap, debris, and waste material. Remove such items to place designated for their storage.
2. Weekly, and more often if necessary, sweep interior spaces clean.
3. As required preparatory to installation of succeeding materials, clean structures or pertinent portions thereof to degree of cleanliness recommended by manufacturer of succeeding material, using equipment and materials required to achieve necessary cleanliness.
4. Once finish work begins, the cleaning process will be on a daily basis (and more often if necessary) at all times while finish work is being performed. "Clean", "Cleaning" shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 012300 – ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

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 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 alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Modify 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. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. 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

3.1 SCHEDULE OF ALTERNATES

- A. Additive Bid Item 1:
1. Base Bid: Classrooms #4, 5, 6, 11 and Work Room #9.
  2. Lump sum price for all work to renovate Classrooms 7 and 8 complete, in accordance with the drawings and specifications.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

B. Additive Bid Item 2:

1. Base Bid: Classrooms #4, 5, 6, 11 and Work Room #9.
2. Lump sum price for all work to renovate Classrooms 1, 2, and 3 complete, in accordance with the drawings and specifications.

END OF SECTION 012300

## SECTION 012500 - SUBSTITUTION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and Contract Documents apply to this Section.

#### 1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

#### 1.3 SUBMITTALS

- A. Substitution Requests: Contractor shall request and submit a "Substitution Request Form – After Receipt of Bids" for all substitutions to be considered after receipt of bids.
  - 1. Substitution Request Form: Use the Architect's form, which can be obtained from the Architect at the time of the request.
    - a. The form is an electronic Word document requiring the Contractor to fill in "data fields."
    - b. A copy of the form is attached to the end of this Section for informational purposes only. Use the electronic Word document only.
  - 2. No substitutions will be considered unless submitted using the referenced "Substitution Request Form – After Receipt of Bids."
  - 3. All substitutions must be submitted by the Contractor, and shall include the Contractor's certification and signature.
    - a. Substitution requests submitted directly from subcontractors, sub-subcontractors, manufacturers, vendors, installer, and suppliers will be rejected.
  - 4. Supporting data for the Substitution Request shall include:
    - a. 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, which will be necessary to accommodate proposed substitution.
    - b. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
    - c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - d. Samples, where applicable or requested.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- e. Certificates and qualification data, where applicable or requested.
  - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
  - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - h. Research reports evidencing compliance with building code in effect for Project.
  - 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 date of receipt of purchase order, 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 except as indicated in substitution request, is compatible with related materials, 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.
5. Failure to submit the form, or a fully completed form, shall result in the rejection of the proposed substitution.
  6. If the proposed substitution is found to be acceptable to the Architect, the request will be forwarded to the Owner for their approval.
  7. If the Owner approves the substitution, it will then be included in a Change Order or Construction Change Directive.
  8. Only substitutions included in Change Orders or Construction Change Directives shall be allowed to be included in the Work
  9. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution.
    - a. Forms of Acceptance: Change Order or Construction Change Directive only.

#### 1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

#### 1.5 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. 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.
- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 15 days after Award of Construction Contract. Requests received after that time may be considered or rejected at discretion of Architect.
1. Conditions: Architect will consider Contractor's request for substitution when all of the following conditions are satisfied. If all of the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume.
      - 1) Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.
    - e. Requested substitution will not adversely affect Contractor's construction schedule.
    - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - g. Requested substitution is compatible with other portions of the Work.
    - h. Requested substitution has been coordinated with other portions of the Work.
    - i. Requested substitution provides specified warranty.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- j. 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.

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012500

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue 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: Architect 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. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request or 14 days, when not otherwise specified, 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's 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.
    - e. Quotation Form: Use forms acceptable to Architect.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
  - 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.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

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's 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 requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Architect.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. Unit-Price Adjustment: See Section 012200 "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit-price work.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect 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

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents 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:
1. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.
  2. Division 01 Section "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.3 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. Submittal schedule.
    - c. Items required to be indicated as separate activities in Contractor's construction schedule.
  2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents format (specification section numbers and names) 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 Architect.
    - c. Architect's project number.
    - d. Contractor's name and address.
    - e. Date of submittal.
  2. 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.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
  - 1) Labor.
  - 2) Materials.
  - 3) Equipment.
- 3. 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 multiple line items for principal subcontract amounts in excess of five percent of Contract Sum or as appropriate.
- 4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
- 5. 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. If required, include evidence of insurance.
- 6. 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.
- 7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
- 8. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
- 9. 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.
- 10. 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.

#### 1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect 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.
- B. Payment Application Times: Contractor shall submit application for payment at regularly scheduled pay meetings as established at the Pre-Construction Conference. The period covered by each Application for Payment shall be clarified at the Pre-Construction Conference.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect 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 for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Materials previously stored and included in previous Applications for Payment.
    - b. Work completed for this Application utilizing previously stored materials.
    - c. Additional materials stored with this Application.
    - d. Total materials remaining stored, including materials with this Application.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. 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 (preliminary if not final).
  5. Submittal schedule (preliminary if not final).
  6. List of Contractor's staff assignments.
  7. List of Contractor's principal consultants.
  8. Copies of building permits.
  9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  10. Initial progress report.
  11. Report of preconstruction conference.
  12. Certificates of insurance and insurance policies.
  13. Performance and payment bonds.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

14. Data needed to acquire Owner's insurance.
- H. 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.
  - I. 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 G707, "Consent of Surety to Final Payment."
    6. Evidence that claims have been settled.
    7. 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.
    8. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 012900

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Project meetings.

1.3 DEFINITIONS

- A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. 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.
- B. Key Personnel Names: Within 15 days of starting construction operations, 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 addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination (Single Contract): 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.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities 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 the schedule of values.
  3. Installation and removal of temporary facilities and controls.
  4. Delivery and processing of submittals.
  5. Progress meetings.
  6. Preinstallation conferences.
  7. Project closeout activities.
  8. Startup and adjustment of systems.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor 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 that would be clearly answered by simply reading the Contract Documents and that are not open to reasonable misinterpretation therefrom may be deemed "frivolous" by the Architect. The cost in time and materials to respond to frivolous RFIs shall be the responsibility of the Contractor.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of Architect.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
  3. Architect'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 conditions of the Contract.
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- D. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log at intervals as established. Software log with not less than the following:
1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- E. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
- 1.7 PROJECT MEETINGS
- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
  2. Agenda: The Architect will prepare the meeting agenda and distribute it to all invited attendees.
  3. Minutes: The Architect will record significant discussions and agreements achieved. Within 7 days of the meeting the Architect will distribute the meeting minutes to the Owner, the Architect's consultants, and to the Contractor for distribution to his personnel and attending major subcontractors, manufacturers, suppliers and other concerned parties.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. The Architect shall conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. The following discussion topics shall be in addition to those listed in the General Conditions:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing and long-lead items.
    - d. Designation of key personnel and their duties.
    - e. Lines of communications.
    - f. Procedures for processing field decisions and Change Orders.
    - g. Procedures for RFIs.
    - h. Procedures for testing and inspecting.
    - i. Procedures for processing Applications for Payment.
    - j. Distribution of the Contract Documents.
    - k. Submittal procedures.
    - l. Coordination and submittal of color & finish related selections.
    - m. Preparation of record documents.
    - n. Use of the premises and existing building.
    - o. Work restrictions.
    - p. Working hours.
    - q. Owner's occupancy requirements.
    - r. Responsibility for temporary facilities and controls.
    - s. Procedures for moisture and mold control.
    - t. Procedures for disruptions and shutdowns.
    - u. Construction waste management and recycling.
    - v. Parking availability.
    - w. Office, work, and storage areas.
    - x. Equipment deliveries and priorities.
    - y. First aid.
    - z. Security.
    - aa. Progress cleaning.
  3. Minutes: Architect will record and Contractor will distribute meeting minutes.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- C. Construction Indoor Air Quality (IAQ) Management Plan Development Session: (Refer to Division 1 section "Indoor Air Quality Requirements.")
1. Schedule: Schedule a Construction Indoor Air Quality Management planning session at the Project site or other convenient location no later than forty-five (45) days after execution of the Agreement and prior to commencement of wall assembly construction activities. Conduct the meeting to review responsibilities and personnel assignments.
  2. Attendees: The Owner, Architect, Mechanical Engineer, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
  3. Agenda:
    - a. Protection: Discussion of how and where materials that could impact IAQ will be stored, including but not limited to:
      - 1) Insulation.
      - 2) Gypsum board.
      - 3) Flooring materials.
      - 4) Ceiling panels.
      - 5) Furnishings.
      - 6) Odorous chemicals.
    - b. Protection: Discussion of how HVAC equipment will be stored, installed, and operated during construction.
    - c. Pathway Interruption: Discussion of how airflow between construction zones will be limited to prevent the spreading of pollutants from one part of the building to another.
    - d. Housekeeping: Discussion of how the building will be kept clean and dry.
    - e. Scheduling: Discussion of what wet (odor emitting) materials will be used on this project, in order to schedule their installation before fuzzy (odor absorbing) materials
- D. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction. Contractor conducts conferences, records and distributes meeting minutes.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  2. Agenda: Contractor shall review of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Options.
    - c. Related RFIs.
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. Review of mockups.
    - i. Possible conflicts.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- j. Compatibility requirements.
  - k. Time schedules.
  - l. Weather limitations.
  - m. Manufacturer's written instructions.
  - n. Warranty requirements.
  - o. Compatibility of materials.
  - p. Acceptability of substrates.
  - q. Temporary facilities and controls.
  - r. Space and access limitations.
  - s. Regulations of authorities having jurisdiction.
  - t. Testing and inspecting requirements.
  - u. Installation procedures.
  - v. Coordination with other work.
  - w. Required performance results.
  - x. Protection of adjacent work.
  - y. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- E. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
- 1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  - 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    - a. Preparation of record documents.
    - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    - c. Submittal of written warranties.
    - d. Requirements for preparing operations and maintenance data.
    - e. Requirements for delivery of material samples, attic stock, and spare parts.
    - f. Requirements for demonstration and training.
    - g. Preparation of Contractor's punch list.
    - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
    - i. Submittal procedures.
    - j. Coordination of separate contracts.
    - k. Owner's partial occupancy requirements.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- l. Installation of Owner's furniture, fixtures, and equipment.
  - m. Responsibility for removing temporary facilities and controls.
  4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- F. Progress Meetings: The Architect shall conduct progress meetings at semi-monthly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: Representatives of the Owner, the Architect and the Contractor shall be represented at each of these meetings. Design consultants, Subcontractors, suppliers, and other entities concerned with current progress or involved in planning, coordination, or performance of future activities may be invited to attend these meetings on an as needed basis to resolve specific issues. All participants at these meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to 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.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Resolution of BIM component conflicts.
      - 4) Status of submittals.
      - 5) Deliveries.
      - 6) Off-site fabrication.
      - 7) Access.
      - 8) Site utilization.
      - 9) Temporary facilities and controls.
      - 10) Progress cleaning.
        - a) Progress of Construction Waste Management
        - b) Progress of Indoor Air Quality Management
      - 11) Quality and work standards.
      - 12) Status of correction of deficient items.
      - 13) Field observations.
      - 14) Status of RFIs.
      - 15) Field Clarification. (FC)
      - 16) Status of proposal requests.
      - 17) Pending changes. (Potential Change Order – PCO)
      - 18) Status of Change Orders. (CO)
      - 19) Pending claims and disputes.
      - 20) Documentation of information for payment requests.
  4. Minutes: Architect will record and Contractor will distribute meeting minutes.
  5. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

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. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUBMITTALS (for information only; no action will be taken by the Architect)

- A. Submittal Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
  - 1. Scheduled date for each submittal.
  - 2. Specification Section number and title.
  - 3. Submittal category (action or informational).
  - 4. Name of subcontractor.
  - 5. Description of the Work covered.
  - 6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
  - 1. Submit an electronic copy of schedule, using software indicated, on CD-R, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.
- C. Daily Construction Reports: Submit two copies at monthly intervals.
- D. Field Condition Reports: Submit two copies at time of discovery of differing conditions.
- E. Special Reports: Submit two copies at time of unusual event.

1.3 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Submittals Schedule, 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 with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTAL SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by Contractor's Construction Schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
  - 1. Coordinate Submittals Schedule with Contractor's Construction Schedule.

## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

#### 1.2 SUMMARY

- A. Section includes requirements for submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

#### 1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

#### 1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.
  - 1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  - 2. Initial Submittal: Submit concurrently with start-up construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Electronic (CADD) Files: The Contractor may request electronic (CADD) files utilizing the Architect's Request Form.
- B. Completeness: Submittals shall be complete in every respect and bound in sets. Each Submittal shall be clearly marked to show each item, component and optional feature proposed to be incorporated into the Project.
  - 1. Incomplete submittals may be returned without action. Incomplete submittal packages returned without action or for additional information are not subject to delay claims.
- C. 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. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  - 4. 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. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
  - 5. Color Selection: In individual specification sections, specific items are identified which require color/finish selections to be made by the Architect from "Color Chart" or "Sample" submittals. To the greatest extent possible, desired finish colors for the design have been preselected by the Owner as indicated in the "Owner's Preselected Color Schedule," attached for information only. Unless indicated otherwise, the preselected colors are not intended to limit selection of matching or acceptable alternative colors from other manufacturers, and should only serve as a guide to intended final appearance. For color submissions other than those exactly matching those explicitly preselected, the Architect must make a coordinated selection and present the resulting alternates to the Owner for approval. Allow reasonable time for assembly, preparation, presentation, and Owner's approval process in addition to the submittal and review process.
    - a. Matching alternative products: Where the "Owner's Preselected Color Schedule" indicates a specific Manufacturer's product, it is suggested that the Contractor submit proposed alternative products for approval no later than 10 days prior to Bid unless there is an exact match. Submit actual material samples, in sizes specified for "final selection" criteria in the product specification if given, or else in sizes ample enough for comparison. Submit enough samples to show full range of variation in color and texture. The Architect shall be the sole judge as to whether the submitted product matches the specified color or is an acceptable alternative.
    - b. Items not preselected for color in the "Owner's Preselected Color Schedule" may already be indicated in the Contract Documents. Where color is not indicated for items, the Contractor shall propose a color for approval.
  - 6. Color Selection: In individual specification sections, specific items are identified which require color/finish selections to be made by the Architect from color chart or sample

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

submittals. The Submittal Schedule, prepared according to "Submittal Schedule" paragraph above, shall identify these required color/finish submittals. The Architect will make coordinated selections of colors/finishes for the building interior, present the resulting color concepts to the Owner for approval, and prepare the actual Color Schedule for the Work.

- a. Submittals requiring color selection must be submitted by Contractor and approved by Architect for conformance with Contract Documents prior to the start of the color selection process. When the submittals have been approved for conformance with Contract Documents, the process for color selection, presentation of color concepts, Owner approval, and Color Schedule preparation will begin.
  - b. After approval of all interior color related submittals for conformance with Contract Documents, the Contractor shall allow a minimum of thirty (30) days for the color selection, Owner's approval process, and preparation of the Color Schedule.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, in accordance with General Conditions and as follows. 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 sufficient time days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect 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 sufficient time days for review of each resubmittal.
  4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing or to allow for a resubmittal, if necessary.
- E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
  4. Include the following information on an inserted cover sheet:
    - a. Project name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name of Contractor.
    - e. Name of firm or entity that prepared submittal.
    - f. Name of subcontractor.
    - g. Name of supplier.
    - h. Name of manufacturer.
    - 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.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- l. Related physical samples submitted directly.
    - m. Other necessary identification.
  5. Include the following information as keywords in the electronic file metadata:
    - a. Project name.
    - b. Number and title of appropriate Specification Section.
    - c. Manufacturer name.
    - d. Product name.
- F. Options: Identify options requiring selection by the Architect.
- G. Deviations: Identify deviations from the Contract Documents on submittals. Submittals without deviations identified will be considered to be in compliance with all requirements.
- H. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
  1. Transmittal Form: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Destination (To:).
    - d. Source (From:).
    - e. Names of subcontractor, manufacturer, and supplier.
    - f. Category and type of submittal.
    - g. Submittal purpose and description.
    - h. Specification Section number and title.
    - i. Indication of full or partial submittal.
    - j. Drawing number and detail references, as appropriate.
    - k. Transmittal number, numbered consecutively.
    - l. Submittal and transmittal distribution record.
    - m. Remarks.
    - n. Signature of transmitter.
  2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies 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 with approval notation from Architect's action stamp.
- J. 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.
- K. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

## PART 2 - PRODUCTS

### 2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections. Action Submittals, for each specification section, shall be submitted as a complete package.
1. Electronic submittals are acceptable on this project. Prior to construction, the Contractor and Architect shall discuss the method for exchanging files. Use of the Architect's Procore service and procedures can be used at no charge. If the Contractor chooses to use a different platform and methodology:
    - a. The Architect may reject the methodology or platform proposed and:
      - 1) use the Architect's Procore service, or
      - 2) the project team will revert to traditional hard-copy exchange
    - b. or the Contractor shall bear the cost of software, licensing, training etc for the project team to participate.
  2. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures."
  3. Certificates and Certifications Submittals: Provide a 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.
    - a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
    - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
  4. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. If a specified product is provided, submit only Action Submittals and where designated, Closeout Submittals, unless directed otherwise by the Architect. The Contractor shall certify compliance with all requirements.

### 2.2 ACTION SUBMITTALS

- A. 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 published 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 catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's printed and published installation instructions.
    - d. Standard color charts.
    - e. Statement of compliance with specified referenced standards.
    - f. Testing by recognized testing agency.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- g. Application of testing agency labels and seals.
      - h. Notation of coordination requirements.
      - i. Availability and delivery time information.
    - 4. For equipment, include the following in addition to the above, as applicable:
      - a. Wiring diagrams showing factory-installed wiring.
      - b. Printed performance curves.
      - c. Operational range diagrams.
      - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
    - 5. Submit Product Data before or concurrent with Samples.
    - 6. Submit Product Data as PDF electronic file.
  - B. 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. Identification of products.
      - b. Schedules.
      - c. Compliance with specified standards.
      - d. Notation of coordination requirements.
      - e. Notation of dimensions established by field measurement.
      - f. Relationship and attachment to adjoining construction clearly indicated.
      - g. Seal and signature of professional engineer if specified.
    - 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 42 inches (750 by 1067 mm).
    - 3. Submit Shop Drawings as PDF electronic file.
  - C. 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 applicable 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.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

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 one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  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 sets of Samples. Architect will retain two Sample sets; remainder will be returned.
      - 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 sets of paired units that show approximate limits of variations.
- D. Delegated-Design Services:
1. 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.
    - a. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
  2. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally-signed PDF electronic file and three (3) paper copies of certificate, 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.
    - a. 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.
- E. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- 2.3 INFORMATIONAL SUBMITTALS
- A. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
  - B. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- C. 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.
  - 4. Submit subcontract list as PDF electronic file.
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- F. Installer Certificates: Submit 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.
- G. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Submit 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.
- K. Product Test Reports: Submit 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.
- L. Research Reports: Submit 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.
  - 7. Limitations of use.
- M. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- N. Preconstruction Test Reports: Submit 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.
- O. Compatibility Test Reports: Submit 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.
- P. Field Test Reports: Submit reports 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.
- Q. Design Data: Prepare and submit 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.

2.4 CLOSEOUT SUBMITTALS (AND MAINTENANCE MATERIAL SUBMITTALS)

- A. Comply with requirements specified in Division 1 Section "Closeout Procedures."
- B. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: 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 Architect.
- 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 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections required, and return it. The Architect will attach a comment sheet that will indicate what "action" the Contractor shall take. "Actions" and review procedure will be clarified at the Preconstruction Conference.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval as noted from Architect.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- E. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- F. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
  - 1. Section 013200 "Construction Progress Documentation" for developing a schedule of required tests and inspections.
  - 2. Divisions 02 through 49 Sections for specific test and inspection requirements.

#### 1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
- D. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a construction operation, including installation, erection, application, and similar operations.
  - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

#### 1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

#### 1.5 ACTION SUBMITTALS

- A. Shop Drawings: For mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
  - 1. Indicate manufacturer and model number of individual components.
  - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Contractor's Quality-Control Manager Qualifications: For supervisory personnel.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
  - 1. Specification Section number and title.
  - 2. Entity responsible for performing tests and inspections.
  - 3. Description of test and inspection.
  - 4. Identification of applicable standards.
  - 5. Identification of test and inspection methods.
  - 6. Number of tests and inspections required.
  - 7. Time schedule or time span for tests and inspections.
  - 8. Requirements for obtaining samples.
  - 9. Unique characteristics of each quality-control service.

1.7 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice of Award, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
  - 1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: Include in quality-control plan a comprehensive schedule of Work requiring testing or inspection, including the following:
  - 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
  - 2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Inspections."
  - 3. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1.8 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
1. Date of issue.
  2. Project title and number.
  3. Name, address, and telephone number of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical 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.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1.9 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
  - 1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
  - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
  - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
  - 1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
    - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
    - e. When testing is complete, remove test specimens, assemblies, mockups; do not reuse products on Project.
  - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
  - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
  - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
  - 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at the Project.
  - 4. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
    - a. Allow seven days for initial review and each re-review of each mockup.
  - 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  - 7. Demolish and remove mockups when directed, unless otherwise indicated.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
  - 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
  - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
  - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. **Manufacturer's Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. **Testing Agency Responsibilities:** Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
  1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform any duties of Contractor.
- G. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
  1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

4. Facilities for storage and field curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
1. Distribution: Distribute schedule to Owner, Architect testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
  2. Description of the Work tested or inspected.
  3. Date test or inspection results were transmitted to Architect.
  4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 014200 – REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the General Conditions of the Contract. The definitions of this section are in addition to, not in place of, those found in the General Conditions.
- B. “Approved”: When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. “Directed”: A command or instruction by Architect. Other terms including “requested,” “authorized,” “selected,” “required,” and “permitted” have the same meaning as “directed.”
- D. “Indicated”: Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including “shown,” “noted,” “scheduled,” and “specified” have the same meaning as “indicated.”
- E. “Regulations”: Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. “Furnish”: Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. “Install”: Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- H. “Installer”: An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.” It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- I. “Provide”: Furnish and install, complete and ready for the intended use.
- J. “Project Site”: Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
- K. “Punch List” (AIA A201): A “punch list” is a listing of work items required by the Contract Documents which are incomplete or non-conforming. The list of observed deficiencies is compiled in the course of review to determine if the Contractor has attained Substantial Completion. It does not constitute a definitive list of remaining work items, and does not limit, amend or supersede requirements of the Contract Documents. Completion of punchlist items is a requirement to achieve Substantial Completion, in accordance with the General Conditions.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- L. "Replace": The term "replace" means to provide an acceptable like product or material in the place of a missing or unacceptable (rejected) product or material. To "replace" an unacceptable product or material includes its removal and disposal. (The term "reinstall" shall be used to indicate reuse of the original.)
- M. "Written" or "Printed" when used in conjunction with manufacturer's product handling and installation requirements means to comply with the manufacturer's current printed and published information.

### 1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
  - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 014200

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 USE CHARGES

- A. General: Installation and removal of temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- D. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
  - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
  - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
  - 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- E. Dust-, Silica- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-, silica-, and HVAC-control measures proposed for use, proposed locations,

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:

1. Locations of dust- and silica-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste handling procedures.
5. Other dust- and silica-control measures.

#### 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and 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.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

#### 1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top rails. Contractor may provide either fixed or portable fencing to suit conditions. For portable fencing, provide concrete or galvanized steel bases for supporting posts.
- B. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- C. Dust- and Silica-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches.
- D. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

#### 2.2 TEMPORARY FACILITIES

- A. Field Office: Contractor may use a designated portion of existing facility as field office. A separate trailer is not required.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
  2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- (1.2-m-) square tack and marker boards.
  3. Drinking water and private toilet.
  4. Maintain the following materials, specified elsewhere, in the field office available to Architect and Owner's representative at all times:
    - a. Maintain up-to-date set of Contract Documents, including FCs, RFIs, PCOs and COs.
    - b. Maintain up-to-date set of reviewed final shop drawings.
    - c. Maintain up-to-date Contractor's Progress Schedule.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
1. Store combustible materials apart from building.

### 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
  3. The contractor shall have the responsibility to operate the heaters in a manner that provides a safe working environment as well as maintaining the required temperatures for performance of the work.
  4. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures."
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Provide separate facilities for male and female personnel.
  - 2. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
  - 3. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel who handle materials that require wash up. Dispose of drainage properly. Supply cleaning compounds appropriate for each type of material handled.
    - a. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
  - 4. Drinking-Water: Bottled-water, drinking-water units, or drinking water fountains connected to permanent or temporary potable water source.
  - 5. Hand Sanitizer: Provide hand sanitizer stations adjacent to each toilet, wash facility, and in each construction trailer.
- E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
  - 1. Provide measures and equipment to meet warranty requirements of interior woodwork, specified in Division 6 and 12 Sections.
- F. Isolation of Work Areas in Occupied Facilities: Prevent dust, silica, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in areas where work is to be performed.
    - a. Disconnect supply and return ductwork in work areas from HVAC systems servicing occupied areas.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction and continuing until removal of temporary partitions is complete.
      2. Maintain dust and silica partitions during the Work. Use vacuum collection attachments on dust-producing equipment and methods and procedures to collect silica-producing material debris and dust. Isolate work within occupied areas using dust- and silica-containment devices or methods.
      3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
    - G. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
      1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
    - H. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
      1. Connect temporary service to Owner's existing power source, as directed by Owner.
    - I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
      1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
      2. If permanent lighting is not available at time of installation of interior finishes, provide temporary lighting that simulates permanent lighting conditions during installation of interior finishes.
    - J. Telephone Service: Contractor shall ensure that all of its forces, including on-site managers/supervisors of each Subcontractor, have mobile devices and adequate voice and data coverage for on-site operations. Contractor shall confirm coverage on-site and supplement mobile phones with landline and portable radios as required to maintain dependable communications.
    - K. Internet: Provide high speed Wi-Fi Internet service for use by all construction forces, including representatives of Owner, Architect, consultants, inspection agencies, and local authorities having jurisdiction.
- 3.3 SUPPORT FACILITIES INSTALLATION
  - A. General: Comply with the following:
    1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
    2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- B. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- C. Parking: Provide temporary areas for construction personnel. Areas shall be designated by Owner at Pre-construction Conference.
- D. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
  - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
  - 2. Remove snow and ice as required to minimize accumulations.
- E. Project Identification and Temporary Signs: Project signs are not part of the Contract. If the Contractor elects to provide Project identification signs, comply with layout and details indicated on Drawings. Submit proposed sign for Owner approval. Install signs in location(s) to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
- F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

#### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental, OSHA, and other regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control: Comply with requirements specified in Section 311000 "Site Clearing" and on Civil Drawings.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Temporary Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
  2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- J. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- K. Temporary Partitions: Provide floor-to-ceiling dustproof and silica-proof partitions or methods to limit dust, silica, and dirt migration and to separate areas occupied by Owner from fumes and noise.
1. Construct partitions with two layers of 6-mil polyethylene sheet on each side. Cover floor with two layers of 6-mil polyethylene sheet, extending sheets 18 inches up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
  2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  3. Protect air-handling equipment.
  4. Provide walk-off mats at each entrance through partitions.
  5. Provide doors in partitions where needed for egress, to the satisfaction of the Building Official.
- L. Protect existing HVAC equipment from intrusion of dust, silica, dirt and debris during alteration construction operations.
1. Refer to Division 23 Section "Air Filters" "Particulate Air Filtration" for construction filter requirements for protection of mechanical duct systems during construction.
  2. Protect new and existing inactive ductwork during construction operations. Cap ends with 6-mil polyethylene sheet during construction to prevent contamination.
  3. Subject to Owner approval, install filter media having a MERV of at least 8 according to ASHRAE 52.2 at each return-air inlet for the air-handling system used during construction. A complete set of temporary filters shall be installed prior to and at the completion of the temporary use of the system(s). Change filters every two weeks of system(s) temporary operation or as directed by the Architect and/or Owner due to building environmental conditions. The filters to be utilized during the temporary operation shall be the same size as specified for permanent operation. Wrapping of equipment with filter media shall not be permitted
  4. The Architect shall approve the conditions of the building before temporary filters are removed at Substantial Completion.
  5. Testing and balancing shall not be performed when dust, silica, dirt or debris- generating activities are occurring.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- M. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas.
  2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
  4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
  2. Protect stored and installed material from flowing or standing water.
  3. Keep porous and organic materials from coming into prolonged contact with concrete.
  4. Remove standing water from decks.
  5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.
  3. Periodically collect and remove waste containing cellulose or other organic matter.
  4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard, replace, or clean stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  2. Use permanent HVAC system to control humidity.
  3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.

- c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  1. Maintain operation of temporary enclosures, partitions, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve required results and to avoid possibility of damage and violations with federal, state, local regulations.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
  3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

## SECTION 016000 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

#### 1.2 SUMMARY

- A. 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; and equivalent products.

#### 1.3 DEFINITIONS

- A. Products: Items obtained 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. Products salvaged or recycled from other projects are not considered new products.
  - 3. Equivalent Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that are equivalent to or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product" or "basis-of-design standard", 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 equivalent products of additional manufacturers named in the specification.

#### 1.4 ACTION SUBMITTALS

- A. Equivalent Product Requests: Submit request for consideration of each equivalent product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Include data to indicate compliance with the requirements specified in "Equivalent Products" Article.
  - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation of an equivalent product request. Architect will notify Contractor through Construction Manager of approval or rejection of proposed equivalent product request.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "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, select product equivalent with products previously selected, even if previously selected products were also options.
1. Each contractor is responsible for providing products and construction methods equivalent with products and construction methods of other contractors.
  2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect 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 and vandalism. 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 determine compliance with the Contract Documents and to determine 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 foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  6. Protect stored products from damage and liquids from freezing.
  7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces, if any. 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: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for 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 indicated 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, are undamaged and, unless otherwise indicated, 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," Architect will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
  2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
  3. Products:
    - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
    - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed product.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

4. Manufacturers:
    - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Equivalent products or substitutions for Contractor's convenience will not be considered.
    - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Equivalent Products" Article for consideration of an unnamed manufacturer's product.
  5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or an equivalent 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 requirements in "Equivalent Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 EQUIVALENT PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for equivalent product when all of the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require 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.
  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 architects 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. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Installation of the Work.
  - 3. Cutting and patching.
  - 4. Progress cleaning.
  - 5. Starting and adjusting.
  - 6. Protection of installed construction.
  - 7. Correction of the Work.

1.3 DEFINITIONS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- B. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
  - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include, but are not limited to, the following:
    - a. Primary operational systems and equipment.
    - b. Fire separation assemblies.
    - c. Air or smoke barriers.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- d. Fire-suppression systems.
  - e. Mechanical systems piping and ducts.
  - f. Control systems.
  - g. Communication systems.
  - h. Conveying systems.
  - i. Electrical wiring systems.
  - j. Operating systems of special construction.
3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include, but are not limited to, the following:
- a. Water, moisture, or vapor barriers.
  - b. Membranes and flashings.
  - c. Exterior curtain-wall construction.
  - d. Equipment supports.
  - e. Piping, ductwork, vessels, and equipment.
  - f. Noise- and vibration-control elements and systems.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- a. Restrict cutting and patching of existing brick masonry indicated to remain to areas and methods approved by Architect.
- B. Manufacturer's Installation Instructions: Comply with manufacturer's current printed and published (written) instructions and recommendations for storing and installing products and equipment in applications indicated. Maintain copies on-site.

## 1.6 WARRANTY

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

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
  - 1. For all battery-operated devices, provide batteries rated for operation for at least one year.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, 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; underground electrical services, and other utilities.
  2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, 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:
    - 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 caused by differing field conditions outside the control

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

of the Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

- E. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages in the construction.
- F. Coordinate delivery of items to Project site.

### 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 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
  - 1. Where batteries are not provided with battery-operated devices, install batteries.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that 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. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 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 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjacent occupied areas or interruption of free passage to adjacent occupied areas is unavoidable, coordinate cutting and patching in accordance with requirements of Section 011000 "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Masonry: Remove existing brick in whole units using hand tools. Minimize disturbance of existing masonry indicated to remain.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
  - 7. Pattern Finishes: Carefully cut the existing finish material to a joint, pattern line, or similar feature to help hide patching work.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
  - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- b. Restore damaged pipe covering to its original condition.
- 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
  - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
- 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
- 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. 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 waste materials more than seven days during normal weather or three 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.
    - a. Utilize containers intended for holding waste materials of type to be stored.
  - 4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
- 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.
- 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.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls."
- 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, including silica, during the construction period.

### 3.6 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment. Replace failing batteries.
- D. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."

### 3.7 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.

### 3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 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.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for progress cleaning of Project site.
  - 2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
  - 3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
  - 4. Section 017900 "Demonstration and Training" for requirements for instructing Owner's personnel.

1.3 ACTION SUBMITTALS

- A. Product Data: For cleaning agents.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete. Substantial Completion shall be for entire scope of Work (for example, both building and sitework) unless Owner has previously agreed to an alternative arrangement.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
  3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number where applicable.
    - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain signature for receipt of submittals.
  5. Submit test/adjust/balance records.
  6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment. Demonstrate that air and water systems are balanced and that automatic temperature control system is in control of all equipment as indicated. This may require separate demonstrations if controls cannot be tested for applicable seasons of the year.
  4. Submit written certification that all special inspections have been completed.
  5. Submit written certification that all Building Commissioning has been completed, and as required by the appropriate Sections.
  6. Submit written certification that testing/adjusting/balancing operations have been completed, and that systems are operational and under control in conformance with requirements of Division 1.
  7. Complete testing of the electronic security equipment demonstrating security control.
  8. Perform preventive maintenance on equipment used prior to Substantial Completion.
  9. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
  10. Advise Owner of changeover in heat and other utilities.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

11. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
12. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect 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 Architect, 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. If more than two inspections by the Architect are necessary to issue a Certificate of Substantial Completion, the Contractor shall bear all costs of the Architect for additional inspections in accordance with paragraph 9.11 of the Supplementary Conditions. Such costs shall include, but not be limited to, expenses for labor, transportation and per diem costs associated with reinspections of the Work.
3. Results of completed inspection will form the basis of requirements for final completion.

#### 1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect 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.
2. In the event that the Work is not complete at the time of reinspection, the Contractor shall be liable for the costs of additional reinspections by the Architect (in accordance with paragraph 9.11 of the Supplementary Conditions).

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding interior in numbered order of Architect's finish schedule.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.
  - 4. Submit list of incomplete items in the following format:
    - a. MS Excel electronic file. Architect, will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 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 Project Manual.
  - 1. Bind warranties and bonds in heavy-duty, three-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.
  - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

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: Perform 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 designated 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. Remove snow and ice to provide safe access to building.
    - f. 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.
    - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - h. Sweep concrete floors broom clean in unoccupied spaces.
    - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
    - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
    - k. Remove labels that are not permanent.
    - l. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grilles.
  - o. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
    - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.
  - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
  - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Division 1 Section "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste disposal requirements in Division 1 Section "Temporary Facilities and Controls."

### 3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
- 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
  - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
    - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
  - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
  - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory.
  - 2. Emergency manuals.
  - 3. Operation manuals for systems, subsystems, and equipment.
  - 4. Product maintenance manuals.
  - 5. Systems and equipment maintenance manuals.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

- A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.
  - 1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
  - 2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.
- B. Format: Submit operations and maintenance manuals in the following format:
  - 1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.
    - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
    - b. Enable inserted reviewer comments on draft submittals.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

## PART 2 - PRODUCTS

### 2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:
  1. List of documents.
  2. List of systems.
  3. List of equipment.
  4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

### 2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Include the following information:
  1. Subject matter included in manual.
  2. Name and address of Project.
  3. Name and address of Owner.
  4. Date of submittal.
  5. Name and contact information for Contractor.
  6. Name and contact information for Architect.
  7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  8. Cross-reference to related systems in other operation and maintenance manuals.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
  - 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
  - 1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  - 2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

## 2.3 EMERGENCY MANUALS

- A. Content: Organize manual into a separate section for each of the following:
  - 1. Type of emergency.
  - 2. Emergency instructions.
  - 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  - 1. Fire.
  - 2. Flood.
  - 3. Gas leak.
  - 4. Water leak.
  - 5. Power failure.
  - 6. Water outage.
  - 7. System, subsystem, or equipment failure.
  - 8. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
  - 1. Instructions on stopping.
  - 2. Shutdown instructions for each type of emergency.
  - 3. Operating instructions for conditions outside normal operating limits.
  - 4. Required sequences for electric or electronic systems.

5. Special operating instructions and procedures.

## 2.4 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
  1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  2. Performance and design criteria if Contractor has delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.
  8. Piped system diagrams.
  9. Precautions against improper use.
  10. License requirements including inspection and renewal dates.
- B. Descriptions: Include the following:
  1. Product name and model number. Use designations for products indicated on Contract Documents.
  2. Manufacturer's name.
  3. Equipment identification with serial number of each component.
  4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include the following, as applicable:
  1. Startup procedures.
  2. Equipment or system break-in procedures.
  3. Routine and normal operating instructions.
  4. Regulation and control procedures.
  5. Instructions on stopping.
  6. Normal shutdown instructions.
  7. Seasonal and weekend operating instructions.
  8. Required sequences for electric or electronic systems.
  9. Special operating instructions and procedures.
- D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

## 2.5 PRODUCT MAINTENANCE MANUALS

- A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
  - 1. Test and inspection instructions.
  - 2. Troubleshooting guide.
  - 3. Precautions against improper maintenance.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  5. Aligning, adjusting, and checking instructions.
  6. Demonstration and training video recording, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

### PART 3 - EXECUTION

#### 3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
1. Do not use original project record documents as part of operation and maintenance manuals.
  2. Comply with requirements of newly prepared record Drawings in Division 1 Section "Project Record Documents."
- G. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
1. Record Drawings.
  2. Record Specifications.
  3. Record Product Data.
  4. Miscellaneous record submittals.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
1. Number of Copies: Submit copies of record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit PDF electronic files of scanned record prints.
      - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic files of scanned record prints.
      - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.
1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit annotated PDF electronic files and directories of each submittal.
- E. Reports: Submit written report weekly indicating items incorporated into project record documents concurrent with progress of the Work, including revisions, concealed conditions, field changes, product selections, and other notations incorporated.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

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 provide information for preparation of corresponding 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 acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding archive photographic documentation.
  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 Architect'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 and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  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. 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. Format: Annotated PDF electronic file.
  3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  4. Identification: As follows:
    - a. Project name.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

- b. Date.
- c. Designation "PROJECT RECORD DRAWINGS."
- d. Name of Architect.
- 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. Note related Change Orders and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

## 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 and record Drawings where applicable.
- B. Format: Submit record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.
  - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

## 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.
- B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.
  - 1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

## 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 revisions to project record documents as they occur; do not wait until end of Project.
- 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

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

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 Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 018119 - INDOOR AIR QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUMMARY

- A. Provide Indoor Air Quality (IAQ) Management Plan to remain in force during the construction period.
- B. Comply with Chapter 3 of the Sheet Metal and Air Conditioning National Contractors' Association (SMACNA) IAQ Guideline for Occupied Buildings Under Construction, 2<sup>nd</sup> Edition 2007, available from SMACNA (703-803-2980 or [www.smacna.org](http://www.smacna.org)).

1.3 SUBMITTAL

- A. Construction Indoor Air Quality Management Plan (CIAQM Plan).

PART 2 - OBJECTIVES DURING CONSTRUCTION

2.1 PROTECTION

- A. Store all materials and equipment in a protected area (inside warehouse or storage trailer). Protect materials and equipment that are too large or heavy to store in a trailer from water and dirt/dust/debris.
  - 1. OPTION: When stored outside, provide two layers of minimum 8-mil poly on the ground and elevate equipment or material a minimum of 4 inches to allow water to run off. Secure top and sides with two layers of 8-mil poly to prevent water penetration and dust/dirt accumulation.
- B. Protect HVAC equipment from dust and odors. Do not store equipment in areas near painting, pressure washing, or excavation. Do not operate equipment during cutting or grinding of masonry or concrete.
  - 1. Refer to Division 23 for construction filter requirements for protection of mechanical duct systems during construction.
  - 2. Clean ductwork when installed. Cap ends with poly during construction to prevent contamination.
  - 3. Do not operate HVAC system until the exterior walls, roof, glass, doors and building filters are properly installed.
  - 4. If air handlers must be used during construction, provide filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 at each air-handling unit. Provide specified prefilters and final filters for operation during construction or install temporary 4-inch MERV 8 filters at each return air grille for operation during construction.
  - 5. Replace all filtration media immediately prior to Substantial Completion.
    - a. Filtration media installed in air-handling units shall have a Minimum Efficiency Reporting Value (MERV) of 8.

MURRAY ELEMENTARY SCHOOL CASEWORK RENOVATION  
ALBEMARLE COUNTY PUBLIC SCHOOLS  
Architect's Project No: 623309

---

6. Do not perform Testing and Balancing until dust or odor generating activities are completed.

## 2.2 SOURCE CONTROL

- A. Minimize IAQ contaminants introduced by construction materials.
- B. Store waste construction materials a minimum of 30 feet away from the building.
- C. Do not smoke within 30 feet of the exterior building perimeter.

## 2.3 PATHWAY INTERRUPTION

- A. Provide barriers to contain construction areas to allow a portion of the building to be cleaned and then operate the HVAC system in that cleaned area. Acceptable barriers include dust curtains and temporary walls.
  1. Protect areas of the building in which HVAC is operational by physical barriers from areas of the building not acceptable for operation of the HVAC system.
- B. Maintain areas within 30 feet of outdoor air intakes free of dust, dirt, debris, and volatile materials while the HVAC system is in operation.

## 2.4 HOUSEKEEPING

- A. As dust accumulates at the Site, it can become airborne when disturbed by nearby activity. Similarly, spills or excess applications of products containing solvents will increase odors at the Site. Leaving the Site wet or damp for more than a day could result in the growth of mold and bacteria. Therefore, Site cleanup and maintenance is important to maintaining good IAQ during construction.
- B. Perform the following to control contaminants at the Site:
  1. Suppress dust with wetting agents or sweeping compounds
  2. Provide an efficient dust collection method (e.g. a damp rag, wet mop, or vacuum equipped with a high efficiency particulate arrester (HEPA) filter or wet scrubber).
  3. Remove spills or excess applications of solvent-containing products immediately. Provide low-VOC emitting spot removers and cleaning agents near occupied areas.
  4. Remove accumulated water and keep work areas as dry as possible, including the use of dehumidification, if necessary.
  5. Once building is enclosed, vacuum with HEPA filtered vacuum cleaners to prevent settled dust from becoming airborne again.
  6. Protect porous materials from exposure to moisture. Replace items that remain damp for more than four hours.

END OF SECTION 018119

SECTION 024119 – SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. (Remove and) Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. (Remove and) Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing (to Remain): Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.3 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.

1.4 INFORMATIONAL SUBMITTALS

- A. Engineering Survey: Submit engineering survey of condition of building.
- B. Pre-demolition Digital Photographs or Digital Video-recordings: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit to Owner's representative as part of the submittal package required prior to release of the first request for payment.
  - 1. Prior to mobilization, Owner's representative and Contractor shall together review existing conditions in the construction and mobilization area. The Contractor in the presence of the Owner shall digitally photograph or video-record existing conditions in sufficient detail to record accurately the physical conditions at the start of construction.
  - 2. The Contractor shall provide and the Owner and Contractor shall retain identical digital copies of the documentation.
  - 3. At closeout the Owner's acceptance of the Work includes acceptance of the remaining existing conditions as undamaged by Contractor's forces.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

- C. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.
- 1.5 CLOSEOUT SUBMITTALS
  - A. Inventory: Submit a list of items that have been removed and salvaged.
- 1.6 QUALITY ASSURANCE
  - A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.
- 1.7 FIELD CONDITIONS
  - A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
  - B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
    - 1. Before selective demolition, Owner will remove loose furniture, furnishings and equipment.
  - C. All demolition work shall be considered unclassified. Barring discovery of hazardous materials or undocumented structural components, where elements are indicated to be demolished, the bid price shall be for complete demolition of the element, regardless of the individual component makeup of that element.
  - D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
  - E. Coordination of Selective Demolition Activities: Coordinate the following with Owner:
    - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
    - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
    - 3. Coordination for shutoff, capping, and continuation of utility services.
    - 4. Use of elevator and stairs.
    - 5. Locations of proposed dust- and noise-control temporary partitions and means of egress.
    - 6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
    - 7. Means of protection for items to remain and items in path of waste removal from building.
  - F. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
    - 1. Hazardous materials will be removed by Owner before start of the Work.
    - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
  - G. Storage or sale of removed items or materials on-site is not permitted.
  - H. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
    - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Take measures required by OSHA and governing authorities. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction digital photographs or preconstruction digital video recordings.
  - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems which will remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off utilities with utility companies.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

- a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
- b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
- c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
- d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
- e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Maintain fire watch during and for at least 30 minutes after flame-cutting operations.
  6. Maintain adequate ventilation when using cutting torches.
  7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  10. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Existing Surfaces to Receive Finishes:
1. Remove miscellaneous hangers, exposed nails not serving as fasteners, and similar protrusions; remove adhesive residue and tape; fill anchorage holes; and otherwise patch and restore surface to be a uniform substrate suitable for applied finishes.
- D. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- E. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- F. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS
- A. Floor Finishes: After removal of existing floor finishes including backings, underlayments, and thick-set mortar beds; remove all residual adhesives and glue. Provide grinding, sanding, or shot-blasting of existing concrete floor slab to achieve the proper surface to receive new indicated floor finish. Coordinate slab surface preparations required for each new indicated floor finish with appropriate subcontractor.

- B. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

### 3.7 CLEANING

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

END OF SECTION 024119

## SECTION 079200 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified in other sections by reference to this Section:
  - 1. Interior joints in the following vertical surfaces and horizontal non-traffic surfaces:
    - a. Vertical joints on exposed surfaces of interior unit masonry walls and partitions.
    - b. Perimeter joints between interior wall surfaces and frames of interior doors.
    - c. Joints between plumbing fixtures and adjoining walls, floors, and counters.
    - d. Joints between dissimilar materials unless detailed otherwise.
    - e. Through-penetration joints in non-rated assemblies.
    - f. Joints at wall terminations at decks, caps, or obstructions.
    - g. Other joints as indicated.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

#### 1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
- E. Qualification Data: For Installer and testing agency.
- F. Preconstruction Field Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on preconstruction testing specified in "Quality Assurance" Article.
- G. Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

- H. Field Test Report Log: For each elastomeric sealant application.
- I. Product Test Reports: Based on comprehensive testing of product formulations per-formed by a qualified testing agency, indicating that sealants comply with requirements.
- J. Warranties: Special warranties specified in this Section.
- K. Joint-Sealant Schedule: Include the following information:
  - 1. Specification Section.
  - 2. Joint-sealant joint location.
  - 3. Joint-sealant joint type/designation.
  - 4. Joint-sealant manufacturer.
  - 5. Joint-sealant product name.
  - 6. Joint-sealant formulation.
  - 7. Joint-sealant primer, when required.
  - 8. Joint-sealant backer rod type, when required.
  - 9. Joint-sealant color.
  - 10. Installer.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.
- C. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
  - 1. Use manufacturer's standard test method to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
  - 2. Submit minimum of eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
  - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  - 4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
  - 5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing of current sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.
- D. Product Testing: Obtain test results for "Product Test Reports" Paragraph in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period preceding the commencement of the Work.
  - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.
  - 2. Test elastomeric joint sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.
  - 3. Test other joint sealants for compliance with requirements indicated by referencing standard specifications and test methods.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Installer's standard form in which Installer agrees to repair or replace elastomeric joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which elastomeric sealant manufacturer agrees to furnish elastomeric joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period - Silicone: 20 years from date of Substantial Completion.
  - 2. Warranty Period - Urethane: 5 years from date of Substantial Completion.
- C. Special warranties specified in this Article exclude deterioration or failure of elastomeric joint sealants from the following:
  - 1. Movement of the structure resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression caused by structural settlement or errors attributable to design or construction.
  - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
  - 3. Mechanical damage caused by individuals, tools, or other outside agents.
  - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.
- C. Single-Component Mildew-Resistant Silicone Sealant **ES-3**:
  - 1. Neutral-Curing Products:
    - a. Pecora Corporation; 898.
    - b. Tremco; Tremsil 600 White.
  - 2. Acid-Curing Products:
    - a. Dow Corning Corporation; 786 Mildew Resistant.
    - b. GE Silicones; Sanitary SCS1700.
    - c. Tremco; Tremsil 200 [White].
  - 3. Type and Grade: S (single component) and NS (nonsag).
  - 4. Class: 25.
  - 5. Use Related to Exposure: NT (nontraffic).
  - 6. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.
    - a. Use O Joint Substrates: Galvanized steel and ceramic tile.
- D. Non-Traffic Multicomponent Nonsag Urethane Sealant **ES-4**:
  - 1. Products:
    - a. BASF; MasterSeal NP2.
    - b. Pecora Corporation; Dynatrol II.
    - c. Tremco; Dymeric 240 FC.
    - d. Sika Corporation, Inc.; Sikaflex - 2c NS TG.
    - e. Tremco; Vulkem 227.
  - 2. Type and Grade: M (multicomponent) and NS (nonsag).
  - 3. Class: 25 minimum.
  - 4. Use Related to Exposure: NT (nontraffic).
  - 5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrate, O.

### 2.4 LATEX JOINT SEALANTS

- A. Latex Sealant **LS-1**: Comply with ASTM C 834, Type OP, Grade NF.
- B. Products:
  - 1. BASF; MasterSeal NP 520.
  - 2. Bostik Findley; Chem-Calk 600.
  - 3. Pecora Corporation; AC-20+.
  - 4. Tremco; Tremflex 834.

## 2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), O (open-cell material), B (bi-cellular material with a surface skin), or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

## 2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

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

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after

cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
  - b. Masonry.
  - c. Unglazed surfaces of ceramic tile. (work of Division 9 Section "Tiling.")
  - d. Acoustical sealant at gypsum board partitions. (work of Division 9)
3. Remove laitance and form-release agents from concrete.
  4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass. (work of Division 8 Section "Glazing.")
    - c. Porcelain enamel.
    - d. Glazed surfaces of ceramic tile. (work of Division 9 Section "Tiling.")
    - e. Acoustical sealant at perimeter metal edge moldings of acoustical panel ceilings. (work of Division 9 "Acoustical Panel Ceilings)
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
  1. Provide sealant for all joints where sealant is not specified in other Sections. Seal all joints between dissimilar materials, unless indicated otherwise.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  1. Do not leave gaps between ends of sealant backings.
  2. Do not stretch, twist, puncture, or tear sealant backings.
  3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  1. Place sealants so they directly contact and fully wet joint substrates.

2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

### 3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed elastomeric sealant joints as follows:
    - a. Perform 3 tests for each type of elastomeric sealant and joint substrate.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab in Appendix X1 in ASTM C 1193, as appropriate for type of joint-sealant application indicated.
    - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; do this by extending cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  3. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
  4. Inspect tested joints and report on the following:
    - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
    - b. Whether sealants filled joint cavities and are free of voids.
    - c. Whether sealant dimensions and configurations meet specified requirements.
  5. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
  6. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

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

3.6 PROTECTION

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

3.7 JOINT-SEALANT SCHEDULE (Type M = multi-component, Type S = single-component)

- A. Joint-Sealant Application: Interior joints between plumbing fixtures and adjoining walls, floors, and counters.
  - 1. Joint Sealant: Type S mildew-resistant neutral or acid-curing silicone sealant **ES-3**.
  - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- B. Joint-Sealant Application: Vertical joints on exposed surfaces of interior unit masonry and concrete walls and partitions.
  - 1. Joint Sealant: Non-Traffic Type M nonsag urethane sealant ES-4.
  - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.
- C. Joint-Sealant Application: Perimeter joints between interior wall surfaces and frames of interior doors, windows, and elevator entrances.
  - 1. Joint Sealant: Latex sealant LS-1.
  - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range.

END OF SECTION 079200

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Samples for Verification: For each type of product indicated, in manufacturer's standard-size Samples but not less than 12 inches (300 mm) long, of each resilient product color, texture, and pattern required.
- D. Product Schedule: For resilient products. **Use same designations indicated on Drawings.**

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
- B. Source Limitations: Obtain resilient base through single source from single manufacturer.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.5 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not below 70 deg F (21 deg C) or above 95 deg F (35 deg C), in spaces to receive resilient products during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).
- C. Install resilient products after other finishing operations, including painting, have been completed.

1.6 EXTRA MATERIALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern, and size of resilient product installed.

## PART 2 - PRODUCTS

### 2.1 RESILIENT BASE <RB>

- A. Resilient Base:
  - 1. Available Type TP (rubber, thermoplastic) Products: Provide one of the following or alternate complying material acceptable to Architect.
    - a. Burke Flooring, Div. of Burke Industries; Rubber Wall Base - Cove
    - b. Johnsonite; Rubber Wall Base – Cove. **\*BASIS-OF-DESIGN**
    - c. Nora Systems, Inc.
    - d. Roppe Corporation; 700 Series TPR Wall Base – Style B (Cove).
- B. Resilient Base Standard: ASTM F 1861.
  - 1. Material Requirement and Manufacturing Group: Type TP (rubber, thermoplastic), Group I (solid, homogeneous) or Group II (layered).
- C. Minimum Thickness: 0.125 inch (3.2 mm).
- D. Height: 4” Height for new construction, 6” Height for renovation/replacement (if necessary)
- E. Lengths: Roll or 4’ sections, per approved recommendation
- F. Outside and Inside Corners: Job formed.
- G. Finish: As selected by Architect from manufacturer's full range.
- H. Colors and Patterns: As selected by Architect from full range of industry colors.

### 2.2 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
- C. Floor Polish: Provide protective liquid floor polish products as recommended by resilient stair tread manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

- B. Concrete Substrates for Resilient Stair Treads and Accessories: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install resilient products until they are same temperature as the space where they are to be installed.
  - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

### 3.3 RESILIENT BASE INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient base.
- B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- C. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.
- D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- E. Do not stretch resilient base during installation.
- F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- G. Job-Formed Corners:
  - 1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends.
  - 2. Inside Corners: Use straight pieces of maximum lengths possible.

### 3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
  - 1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

- D. Floor Polish: Remove soil, visible adhesive, and surface blemishes from resilient stair treads before applying liquid floor polish.
  - 1. Apply three coat(s).
- E. Cover resilient products until Substantial Completion.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Grain: The apparent direction of the printed or inherent design in a tile.
- B. Pattern: The color arrangement and/or geometric arrangement of multiple tiles on a surface.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of resilient floor tile.
  - 1. Include floor tile layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
  - 2. Show details of special patterns.
- C. Samples for Verification: Full-size units of each color and pattern of floor tile required.
- D. Product Schedule: For floor tile. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Floor Tile: Furnish one box for every 50 boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.9 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C. Close spaces to traffic during floor tile installation.
- D. Close spaces to traffic for 48 hours after floor tile installation.
- E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 VINYL COMPOSITION FLOOR TILE (VCT)

- A. Products: Subject to compliance with requirements, provide one of the following:
  - 1. Armstrong World Industries, Inc; Excelon **\*BASIS-OF-DESIGN**
  - 2. Johnsonite, a Tarkett Company; Azrock.
  - 3. Vinylasa; Nova.
- B. Tile Standard: ASTM F 1066, Class 2 (through-pattern tile). Pattern and colors on the surface of the tile shall extend entirely through the thickness of the tile. Changes in the appearance of the pattern through the thickness of the tile are not acceptable. "Through-color" composition tile is not acceptable.
- C. Wearing Surface: Smooth.
- D. Thickness: 0.125 inch.
- E. Size: 12 by 12 inches.
- F. Colors and Patterns: As selected by Architect from full range of available colors and patterns.

2.3 RESILIENT BASE AND ACCESSORIES

- A. Refer to Division 9 Section "Resilient Base and Accessories."

2.4 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

- B. type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
- C. Floor Polish: Provide protective, liquid floor-polish products if such products are recommended by floor tile manufacturer.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.
- B. Concrete Substrates: Prepare according to ASTM F710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
  - 3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.
    - a. Perform anhydrous calcium chloride test according to ASTM F 1869.
    - b. Perform relative humidity test using in situ probes according to ASTM F 2170.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install floor tiles until materials are the same temperature as space where they are to be installed.
  - 1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.
- E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

#### 3.3 FLOOR TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.
- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
  - 1. Lay tiles square with room axis, unless indicated otherwise.

- C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.
  - 1. Lay out tiles with grain running in directions as follows:
    - a. Non-directional Grain Layout: Adjacent tiles shall not have grain running in the same direction (“quarter turn”) unless indicated otherwise by manufacturer.
- D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of cased openings and to center under door leafs at door openings unless indicated otherwise. Where transitions occur to another flooring material, extend or cut floor tiles to suit transition.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
- G. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- H.

### 3.4 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.
- B. Perform the following operations immediately after completing floor tile installation:
  - 1. Remove adhesive and other blemishes from surfaces.
  - 2. Lightly scrub floors using a green floor pad on an automatic scrubber or 175 rotary machine with a solution of Neutral Cleaner by Essential Industries
  - 3. Rinse floors with clean water and allow the surface to air dry completely.
  - 4. Sweep and vacuum surfaces thoroughly.
  - 5. Damp-mop surfaces to remove marks and soil.
    - a. Do not wash surfaces until after time period recommended by manufacturer.
- C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.
  - 1. Apply eight (8) coats of G2 Green Finish by Essential Industries. There shall be no more than three coats applied per day, with adequate time for curing between coats.
- E. Cover products installed on horizontal surfaces with undyed, untreated building paper until Substantial Completion.
- F. Do not move heavy and sharp objects directly over surfaces. Place hardboard or plywood panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

END OF SECTION 096519

SECTION 099100 – PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DESCRIPTION OF WORK:

- A. Extent of painting work is indicated on drawings and schedules, and as herein specified.
- B. Work includes painting and finishing of interior and exterior exposed items and surfaces throughout Project, except as otherwise indicated.
  - a. Do not provide lettering at rated walls that are exposed to view (that is, in spaces without dropped ceilings).
  - b. Refer to the Life Safety Plans and Partition types for rated wall locations; and reflected ceiling plans for concealed rated wall locations.
- 2. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.
- 3. Painted Patterns and Accent Colors: Location of multi-color paint patterns and accent color areas are indicated in “Interior Accent Paint Color Schedule” on Drawings.
- C. “Paint” as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers, fillers, & other applied materials whether used as prime, intermediate or finish coats.
- D. Surfaces to be Painted: Except where natural finish of material is specifically noted as a surface not to be painted, paint exposed surfaces whether or not colors are designated in “schedules.” Where items or surfaces are not specifically mentioned to be painted, paint the same as similar adjacent materials or areas. If color or finish is not designated, Architect will select these from standard colors or finishes available.
- E. Following categories of work are not included as part of field-applied finish work.
  - 1. Pre-Finished Items: Unless otherwise indicated, do not field-paint items specified for factory- or installer-finishing; such as toilet enclosures, acoustic materials, architectural woodwork, mechanical and electrical equipment, switchgear and distribution cabinets.
  - 2. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, foundation spaces, furred areas, utility tunnels, and pipe spaces, and elevator and duct shafts.
  - 3. Finished Metal Surfaces: Unless otherwise indicated, metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require finish painting.
  - 4. Operating Parts: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts will not require finish painting.
- F. Following categories of work are included under other sections of these specifications.
  - 1. Shop Primers: Unless otherwise specified, shop priming of ferrous metal items is included under various sections for structural steel, metal fabrications, hollow metal work and similar items.

2. Unless otherwise specified, shop priming of fabricated components such as architectural woodwork, wood casework and shop-fabricated or factory-built mechanical and electrical equipment or accessories is included under other sections of these specifications.

G. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates. Do not paint over fire alarm devices, sprinklers and similar fire safety devices.

### 1.3 QUALITY ASSURANCE:

A. Single Source Responsibility: Provide primers, other undercoat paint, and finish coat products produced by same manufacturer for each paint system. Use only thinners approved by paint manufacturer, and use only within recommended limits.

B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.

1. Test primers, bonding primers and coating products for compatibility and adhesion to existing substrates.

### 1.4 SUBMITTALS:

A. Product Data: Submit manufacturer's technical information including Paint label analysis and application instructions for each material proposed. Include paint system schedule in the format used in this specification section.

1. For DTM enamel and water-borne epoxy enamel products, provide the following performance data.

- a. Abrasion Resistance test data per ASTM D4060 with CS-17 wheel, 1000 gram load for 1000 cycles. (CS-10 wheel data not acceptable).
- b. Direct Impact Resistance test data per ASTM D2794.
- c. Adhesion test data per ASTM D4541.

B. Color Chips: Submit color chips of manufacturer's *complete range of colors* for each paint type for Architect's review of color and texture (sheen). These will be used for initial color selection if the submitted range is adequate.

1. Based on products of the selected manufacturer and paint systems specified in this Section, the Architect will prepare an initial color schedule indicating paint colors to be used in each space. The Architect will indicate required colors by referencing the selected paint manufacturer's color chips, or by referencing drawdowns or other standard (such as "match laminate color").

2. Provide 8-1/2 x 11 inch color samples ("drawdowns") for all paint colors and sheens for which the color in Architect's color schedule is not indicated by colors of the selected paint manufacturer for approval prior to application in the field. Provide paint drawdowns in finish sheens applicable to those in the field.

3. Paint Color Formulations: Using paint color references (such as PT1, PT2, etc.) same as indicated in Architect's Color and Finish Schedule, provide schedule listing each paint color and corresponding color formulation of paint manufacturer actually provided. Include color formulations by manufacturer's alpha-numeric indexing system for standard colors of the manufacturer, and custom blend mixes for non-standard colors. Provide hardcopy and electronic copy, Microsoft Word unless indicated otherwise, as directed by [Owner][PWCS].

1.5 DELIVERY AND STORAGE:

- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:
  - 1. Name or title of material.
  - 2. Manufacturer's stock number and date of manufacture.
  - 3. Manufacturer's name.
  - 4. Contents by volume, for major pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
- B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage of paint in a clean condition, free of foreign materials and residue.
- C. Protect from freezing where necessary. Keep storage area neat and orderly. Remove oily rags and waste daily. Take precautions to ensure workmen and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.

1.6 JOB CONDITIONS:

- A. Apply paints only when temperature of surfaces to be painted and surrounding air are between 50°F and 90°F for water-base paints; and between 45°F and 95°F for solvent-thinned paints, unless otherwise permitted by paint manufacturer's printed instructions.
- B. Do not paint in snow, rain, fog or mist, or when relative humidity exceeds 85%, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions.
  - 1. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature and humidity limits specified by paint manufacturer during application and drying periods.
- C. Ventilation: Provide ventilation during coating evaporation stage in confined or enclosed areas in accordance with manufacturer's instructions.
- D. Dust and Contaminants:
  - 1. Schedule coating work to avoid excessive dust and airborne contaminants.
  - 2. Protect work areas from excessive dust and airborne contaminants during coating application and curing.
- E. Furnish extra materials described below that match products installed in unopened one gallon cans and identified with labels describing contents per Architect's Color and Finish Schedule designations.
  - 1. Interior Paint: Furnish an additional 3 percent, but not less than 1 gallon of each material and color applied. (Extra stock of prime coat products is not required.)
  - 2. Store materials, not in use, in tightly covered containers in a well-ventilated area away from ignition sources at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.
  - 3. Do not store extra materials for longer than one (1) year from date of Substantial Completion.
  - 4. Dispose of expired materials in accordance with local governmental regulations

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS:

- A. Interior Paint Specification: Sherwin Williams Promar 200 Low VOC (Basis of Design) or approved equal subject to compliance with requirements below.
- B. Colors: Following are standard wall and trim color specifications:
  - 1. General Wall Color: Sherwin Williams (Or Equal), Aesthetic White SW7035  
Door & Window Trim Color: Sherwin Williams (Or Equal), Accessible Beige SW7036
  - 2. Accent Color: See Finish Schedule
  - 3. Ceiling & Soffit Color: Ceiling White
- C. Water-Based Paints
  - 1. General Wall Paint: Latex, Interior, Institutional Low Odor/VOC, Semi-Gloss Finish
  - 2. Doors, Door Trim, Painted Window Trim, Hand Rail Paint: Latex, Interior, Institutional Low Odor/VOC, Semigloss Finish
  - 3. Ceiling and Soffit Paint: Latex, Interior, Institutional Low Odor/VOC, Flat Finish

### 2.2 MATERIALS:

- A. Material Quality: Provide best quality grade of various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.
- B. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated. Lead content in pigment, if any, is limited to contain not more than 0.06% lead, as lead metal based on the total non-volatile (dry-film) of paint by weight.

## PART 3 - EXECUTION

### 3.1 INSPECTION:

- A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator.
- B. Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise detrimental to formation of a durable paint film.

### 3.2 SURFACE PREPARATION:

- A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.
- 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.

- C. Cleaning: Before applying paint or surface treatments, clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove oil and grease prior to mechanical cleaning.
  - 2. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
  - 3. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- D. Surface Preparation of Previously Painted Hard Surfaces, CMU and Steel Doors and Frames: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
  - 1. Test all remaining previously painted substrates for adhesion of the current coating systems using physical testing procedure ASTM D 3359 (Measuring Adhesion by Tape).
  - 2. If indicated by testing remove all layers of poorly adhering coatings from previously coated substrates.
  - 3. Abrade tightly adhering previously coated/ painted substrates to provide a sufficient surface profile for new coatings systems.
  - 4. Provide barrier primers and/or bonding primers over prepared previously coated substrates and previously coated tightly adhering coating systems on all substrates.
- E. Ferrous Metals: Clean ferrous surfaces, which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.
  - 1. Touch-up shop-applied prime coats wherever damaged or bare, where required by other sections of these specifications. Clean and touch-up with same type shop primer.
- F. Lead-Based Paint Renovation, Repair and Painting (RRP) Rule:
  - 1. Contractors performing renovation, repair and painting projects that disturb painted surfaces in homes, childcare facilities and schools attended by children under age 6 built before 1978, have their firms certified by EPA, use certified renovators who are trained by EPA-approved training providers, and follow lead-safe work practices to prevent lead contamination.  
Contractors will provide proof of EPA Lead-Safe Firm Certification

### 3.3 SURFACE-PREPARATION SCHEDULE FOR PREVIOUSLY PAINTED SURFACES

- A. General: Before painting, prepare surfaces for painting according to applicable requirements specified in this schedule.
  - 1. Examine surfaces to evaluate each surface condition according to the paragraphs below.
  - 2. Where existing degree of soiling prevents examination, preclean surface and allow it to dry before making an evaluation.
- B. Surface Preparation for MPI DSD 0 Degree of Surface Degradation:
  - 1. Surface Condition: Existing paint film in good condition and tightly adhered.
  - 2. Paint Removal: Not required.
  - 3. Preparation for Painting: Wash surface by detergent cleaning; use solvent cleaning where needed. Roughen or degloss cleaned surfaces to ensure paint adhesion according to paint manufacturer's written instructions.
- C. Surface Preparation for MPI DSD 1 Degree of Surface Degradation:

1. Surface Condition: Paint film cracked or broken but adhered.
  2. Paint Removal: Scrape by hand-tool cleaning methods to remove loose paint until only tightly adhered paint remains.
  3. Preparation for Painting: Wash surface by detergent cleaning; use other cleaning methods for small areas of bare substrate if required. Roughen, degloss, and sand the cleaned surfaces to ensure paint adhesion and a smooth finish according to paint manufacturer's written instructions.
- D. Surface Preparation for MPI DSD 2 Degree of Surface Degradation:
1. Surface Condition: Paint film loose, flaking, or peeling.
  2. Paint Removal: Remove loose, flaking, or peeling paint film by hand-tool or chemical paint-removal methods.
  3. Preparation for Painting: Wash surface by detergent cleaning; use solvent cleaning where needed. Use other cleaning methods for small areas of bare substrate if required. Sand surfaces to smooth remaining paint film edges. Prepare bare cleaned surface to be painted according to paint manufacturer's written instructions for substrate construction materials.
- E. Surface Preparation for MPI DSD 3 Degree of Surface Degradation:
1. Surface Condition: Paint film [severely deteriorated] [obscuring fine architectural detail work because of paint-layer buildup] [and] [surface indicated in paint manufacturer's technical representative's inspection report to have paint completely removed].
  2. Paint Removal: Completely remove paint film by hand-tool or chemical paint-removal methods. Remove rust.
  3. Preparation for Painting: Prepare bare cleaned surface according to paint manufacturer's written instructions for substrate construction materials.
- 3.4 MATERIALS PREPARATION:
- A. Mix and prepare painting materials in accordance with manufacturer's directions.
  - B. Maintain paint mixing and application containers in a clean condition, free of foreign materials and residue.
  - C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
- 3.5 APPLICATION:
- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
    1. Provide access to representative of selected coating manufacturer for observation of material application only at all times during painting work. Unless specifically indicated by Architect, this representative shall have no authority to make decisions about the work.
    2. Paint surface treatments and finishes are indicated in "schedules" of Contract Documents.
    3. Provide finish coats that are compatible with prime paints used.
    4. Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive dry film thickness equivalent to that of flat surfaces.

5. Paint surfaces behind movable and permanently fixed equipment and furniture.
  6. Paint duct interior surfaces visible through registers or grilles, with flat, non-specular black paint.
  7. Paint back sides of access panels, and removable or hinged covers.
  8. Finish exterior and interior doors on tops, bottoms and side edges same as faces.
  9. Sand lightly between each succeeding enamel or varnish coat.
  10. Omit first coat (primer) on metal surfaces which have been shop-primed and touch-up painted, unless required to prevent "show-through" for finish topcoats.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
1. Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish total DFT indicated or as recommended by coating manufacturer.
- D. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and in occupied spaces. Do not paint prefinished equipment items unless directed otherwise.
- E. Prime Coats: Apply prime coat to material which is required to be painted or finished, and which has not been prime coated by others. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.
- F. Finish Coats: Provide finish quality for new and repainted surfaces as follows:
1. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.
- G. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.
- H. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.
- 3.6 CLEAN-UP AND PROTECTION:
- A. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day. Upon completion of painting work, clean window glass and other paint spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work until date of Substantial Completion. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
1. Provide "Wet Paint" signs to protect newly-painted finishes. Remove temporary protective wrappings provided by others for their work after completion of painting.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

2. At completion of work of other trades, touch-up & restore all damaged painted surfaces.

END OF SECTION 099100

SECTION 123216 - MANUFACTURED PLASTIC-LAMINATE-FACED CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Open Interiors: Any open storage unit without solid door or drawer fronts and units with full glass insert doors and/or acrylic doors.
- B. Closed Interiors: Any closed storage unit behind solid door or drawer fronts, sliding solid doors.
- C. Exposed Ends: Any storage unit exterior side surface that is visible after installation.
- D. Other Exposed Surfaces: Faces of doors and drawers when closed, and tops of cabinets less than 72 inches above furnished floor.
- E. Semi-Exposed Surfaces: Interior surfaces which are visible and tops of cabinets 72 inches or more above finished floor.
- F. Concealed Surfaces: Any surface not visible after installation.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Indicate dimensions, description of materials and finishes, general construction, specific modifications, component connections, anchorage methods, hardware, and installation procedures, plus the following specific requirements.
  - 1. Include section drawings of typical and special casework, work surfaces and accessories.
  - 2. Indicate locations of plumbing and electrical service field connection by others.
- C. Samples for Initial Selection: For cabinet finishes and for each type of top material indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and Fabricator.
- B. Woodwork Quality Standard Compliance License: Provide license showing proof of certification in AWI Quality Certification Program.
- C. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Woodwork Quality Standard Certificate: Provide AWI Quality Certification Program "Certificate of Compliance" indicating that woodwork, including installation, complies with requirements of grades specified.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum of 5 years' experience in providing manufactured casework systems for similar types of projects, produce evidence of financial stability, bonding

capacity, and adequate facilities and personnel required to perform on this project. Manufacturer shall be a certified participant in AWI's Quality Certification Program.

1. A manufacturer/fabricator does not need to be certified with QCP to bid the project; however, the manufacturer/fabricator shall apply and be licensed as a certified participant before fabricating the work.

B. Installer Qualifications: An authorized representative of institutional casework manufacturer for installation and maintenance of units required for this Project and who is a certified participant in AWI's Quality Certification Program.

C. Source Limitations: Obtain institutional casework through one source from a single manufacturer.

D. Quality Standard: Unless otherwise indicated, comply with "Architectural Woodwork Standards – 2nd Edition, October 1, 2014 published jointly by Architectural Woodwork Institute (AWI), Architectural Woodwork Manufacturer's Association of Canada (AWMAC), and Woodwork Institute (WI) for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1. This project has been registered as AWI/QCP number 23.0377.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver casework only after painting, utility roughing-in, and similar operations that could damage, soil, or deteriorate casework have been completed in installation areas. If casework must be stored in other than installation areas, store only in areas where environmental conditions meet requirements specified in "Project Conditions" Article.

B. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

#### 1.8 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period. Maintain temperature and relative humidity during the remainder of the construction period in range recommended for Project location by the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

B. Established Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where woodwork is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

C. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before being enclosed, and indicate measurements on Shop Drawings.

#### 1.9 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of institutional casework that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:

1. Delamination of components or other failures of glue bond.
2. Warping of components.
3. Failure of operating hardware.

4. Deterioration of finishes.
- B. Warranty Period: Life of Installation.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Casework Manufacturers: Subject to compliance with all requirements, provide Plastic-Laminate-Faced Institutional Casework products by one of the following:
1. Advanced Cabinet Systems (ACS); Marion, IN.
  2. Cabinets By Design, Inc.; Duluth, GA.
  3. Case Systems, Inc.
  4. Cleora Sterling Corp.; Mebane, NC.
  5. Interior Wood Specialties; High Point, NC.
  6. Kewaukee Laminates Group; a Div. of Kewaunee Scientific Corp.
  7. TMI Systems Design Corp.
  8. Stevens Industries, Inc.
  9. Terrill Manufacturing Company, Inc.

### 2.2 CASEWORK, GENERAL

- A. Quality Standard: Unless otherwise indicated, comply with the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" for grades of casework indicated for construction, finishes, installation, and other requirements.
1. Grade: Premium, unless otherwise indicated.
  2. Provide certificates from AWI certification program indicating that casework, including installation, complies with requirements of grades specified.

### 2.3 MATERIALS

- A. Core Materials:
1. Particleboard: ANSI A208.1, provide Grade M-2 or M-3, unless noted otherwise.
  2. Core Material at Countertop containing Sinks: Provide particleboard or MDF meeting the standard for ANSI MR10. Available products include, but are not limited to, the following:
    - a. Arauco North America; "Duraflake VESTA Moisture Resistant ULEF."
    - b. Collins Pine; "FreeForm."
    - c. Georgia-Pacific Building Products; "Ultrastock MR MDF."
    - d. Roseburg Forest Products; "Skyblend MR-10."
    - e. Shop-sanded exterior grade veneer core plywood, minimum 5-ply, 3/4 inch thickness.
- B. Hardboard: 1/4-inch thick prefinished hardboard, CS-251.
- C. High Pressure Decorative Laminates: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
1. Grades:
    - a. High-pressure decorative laminate VGS (.028), NEMA Test LD 3-1995.
    - b. High-pressure decorative laminate HGS (.048), NEMA Test LD 3-1995.
    - c. High-pressure cabinet liner CLS (.020), NEMA Test LD 3-1995.

- d. High-pressure backer BKH (.048), (.028), NEMA Test LD3-1995.
2. Basis-of-Design Manufacturer: Wilsonart International; Div. of Premark International, Inc.
3. Edging Materials:
4. 3mm PVC banding, machine profiled to 1/8-inch radius.

D.

## 2.4 DESIGN, COLOR, AND FINISH

- A. Design: Provide institutional casework of the following design:
  1. Reveal overlay.
- B. Plastic-Laminate Colors, Patterns, and Finishes: Wilsonart, Kensington Maple #10776-60.

## 2.5 CABINET FABRICATION

- A. Plastic-Laminate-Faced Cabinet Construction:
  1. Cabinet Body Construction:
    - a. Tops and bottoms are glued and doweled to cabinet sides and internal cabinet components such as fixed horizontals, rails and verticals. Minimum 6 dowels each joint for 24-inch deep cabinets and a minimum of 4 dowels each joint for 12-inch deep cabinets.
      - 1) Cabinet tops, bottoms and sides are 3/4-inch thick particleboard core.
    - b. Cabinet backs: Minimum 3/8-inch thick prefinished particleboard or 1/4-inch thick medium-density fiberboard fully captured four sides. Provide wall and tall cabinets with a 3/4-inch x 4 inch mounting strip used to secure the cabinet to the wall.
      - 1) Exposed back on fixed or movable cabinets: 3/4-inch particleboard with the exterior surface finished in VGS laminate as selected.
    - c. Provide either of the following types of base construction to support cabinet load transfer, isolate the cabinet ends from contact with floor, and permit leveling.
      - 1) Separate Sub-base: Cabinet sub-base shall be separate and continuous (no cabinet body sides-to-floor), exterior grade plywood with concealed fastening to cabinet bottom. Sub-base shall be ladder-type construction of individual front, back, and intermediates, to form a secure and level platform to which cabinets attach. Sub-base at exposed cabinet end panels shall be recessed 1/4 inch from face of finished end, for flush installation of finished base material by other trades.
      - 2) Integral Base: Provide end panels, cabinet bottoms, and horizontal toe kick members integrally joined together for structural strength and to facilitate load transfer directly through cabinet ends to the floor.
    - d. Base units, except sink base units: Full sub-top or an 8-inch wide rail in the flat horizontal plane at the cabinet front with minimum three (3) dowels per end joint providing stable squaring of the top area and a second wide spacer rail in the vertical plane behind the back with minimum three (3) dowels per end joint providing stable side-to-side rack resistance. Sink base units are provided with open top, a welded steel/epoxy painted sink rail or alternate moisture-protected

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

- engineered construction structural sink rail full width at top front edge concealed behind face rail/doors, a split back removable access panel.
- e. Wheelchair Accessible Sink Base Cabinet: Base cabinet without bottom. Provide doors with durable integral toe kick of manufacturer's design or doors with 18 gage steel powder coated toe kick bracket and exterior grade veneer-core plywood base. Door toe kick bracket equal to "ADA Toe Kick" [www.ezkick.net](http://www.ezkick.net)
  - f. Side panels and vertical dividers shall receive adjustable shelf hardware at 32mm line boring centers. Mount door hinges, drawer slides and pull-out shelves in the line boring for consistent alignment.
  - g. Exposed and semi exposed edges.
    - 1) Edging: 1mm PVC.
    - 2) Exposed Shelf Edging: 3mm PVC.
  - h. Shelves: 3/4-inch- thick plywood or 1-inch- thick particleboard.
    - 1) Front edge: Minimum 1 mm PVC; concealed shelves.
    - 2) Front edge: 3 mm PVC; exposed shelves in open interiors only.
  - i. Interior finish, units with open Interiors: Top, bottom, back, sides, horizontal and vertical members, and adjustable shelving faces with VGS high-pressure decorative laminate.
  - j. Interior finish, units with closed Interiors: Top, bottom, sides, horizontal and vertical members, and adjustable shelving faces with thermally fused melamine laminate with matching prefinished back.
  - k. Exposed ends: Faced with VGS high-pressure decorative laminate.
  - l. Wall unit bottom: Faced with VGS high-pressure decorative laminate.
  - m. Wall and tall unit tops: Top surface is faced with thermally fused melamine laminate.
  - n. Balanced construction of all laminated panels is mandatory. Unfinished core stock surfaces, even on concealed surfaces (excluding edges), not permitted.
2. Drawers:
- a. Sides, back and sub front: Minimum 1/2-inch thick particleboard, laminated with thermally fused melamine doweled and glued into sides. Top edge banded with 1mm PVC.
  - b. Drawer bottom: Minimum 1/2-inch thick particleboard laminated with thermally fused melamine, screwed directly to the bottom edges of drawer box.
  - c. Drawer bottom: Minimum 1/2 inch thick thermoset decorative-panels with CLS (.020) laminate both sides fully captured four sides.
  - d. Paper storage drawers: Minimum 3/4-inch thick particleboard sides, back, and sub front laminated with thermally fused melamine. Minimum 1/2-inch thick particleboard drawer bottoms screwed directly to the bottom edges of the drawer box. Provide PVC angle retaining bar at the rear of the drawer.
3. Door/Drawer Fronts:
- a. Core: 3/4-inch thick particleboard.
  - b. Provide double doors in opening in excess of 24 inches wide.
  - c. Faces: High-pressure laminate.
    - 1) Exterior: VGS High-pressure decorative laminate.
    - 2) Interior: High-pressure cabinet liner CLS.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

- d. Door/drawer edges: 3mm PVC, external edges and outside corners machine profiled to 1/8-inch radius.
- B. Filler Strips: Provide as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as cabinets.
- C. Support Members: Furniture grade, epoxy powder coated steel.
  - 1. Undercounter support frames. Provide heavy-duty wall-mounted counter support fabrication indicated for 30 – 32-inch counter, or alternate construction of comparable structural loading capacity. Provide epoxy-coated finish. Acceptable comparable support frame products include, but are not limited, to the following:
    - a. TMI #A7453
    - b. LSI #30565
- D. ADA-Compliant Sink Cabinet: Provide casework manufacturer's standard ADA compliant (wheelchair accessible) sink counter base units, with removable front panel face for access to plumbing and under-counter clearance for mounting height indicated. Provide module width for application. Acceptable accessible sink counter base units include, but are not limited, to the following:
  - 1. Case Systems Inc. D1000 D1060 (vanity front with pocket doors)
  - 2. LSI Corporation 1136, 1138, 1140
  - 3. TMI Systems B2542

## 2.6 CASEWORK HARDWARE

- A. Hardware, General: Provide manufacturer's standard epoxy powder-coated or chrome-plated finish, commercial-quality, heavy-duty hardware complying with requirements indicated.
  - 1. Use threaded metal or plastic inserts with machine screws for fastening to particleboard except where hardware is through-bolted from back side.
- B. Butt Hinges: Epoxy powder-coated or chrome-plated, semi-concealed, five-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings, 2-3/4-inch overlay type with rounded hospital tips. Provide two hinges for doors less than 48 inches high and three hinges for doors more than 48 inches high.
  - 1. Semi-concealed Hinges for Overlay Doors: BHMA A156.9, B01521.
- C. Pulls: Door and drawer front pulls, are epoxy powder coated or satin chrome finish metal wire style, 96mm spacing on screws. Pull design shall comply with the Americans with Disability Act (ADA).
- D. Door Catches: Powder-coated, nylon-roller spring catch or dual, self-aligning, permanent magnet catch. Provide 2 catches on doors more than 48 inches high.
- E. Drawer Slides: BHMA A156.9, B05091 Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-extension type; zinc-plated steel ball-bearing slides with hold-in detent to prevent rebound.
  - 1. Box Drawer Slides: 100 lbf.
    - a. Accuride #7432 #7434 (1" overtravel)
    - b. Knap & Vogt #KV8414 KV8405 (1" overtravel)
    - c. Fulterer #FR 5000 Series.
- F. Drawer and Door Locks: BHMA A156.11, E07261 cam lock with removable core. Provide where indicated.

- G. Adjustable Shelf Supports: Single-pin metal shelf rests complying with BHMA A156.9, Type B04013.

## 2.7 COUNTERTOPS

- A. Countertops, General: Provide smooth, clean exposed tops and edges in uniform plane free of defects. Provide front and end overhang of 1 inch over base cabinets.
- B. Plastic-Laminate Tops: Plastic-laminate sheet, shop bonded with water-resistant glue to both sides of 1-inch plywood or particleboard. Sand surfaces to which plastic laminate is to be bonded.
  - 1. Provide either built-up or one-piece countertop construction for minimum 1-inch deep front counter edge.
    - a. 1-1/2-inch counter edge built-up of 3/4-inch core material, self-edged with plastic laminate. (3mm PVC available in 1-5/16-inch but not 1-1/2 inch)
    - b. 1-1/4-inch counter edge built-up of 3/4-inch core material countertop + 1/2-inch core material build-up, and 3 mm PVC edge banding. (3mm PVC available in 1-5/16-inch)
  - 2. Plastic-Laminate Type for Flat Tops: HGS. (.048-inch)
  - 3. Plastic-Laminate Type for Backing: BKL. (.028-inch)
  - 4. Provide 3-mm PVC edging on front edge of top, on top edges of backsplashes and end splashes, and on ends of tops and splashes. Machine profile edges and corners to 1/8-inch radius.
- C. Core Material at Countertop containing Sinks: Provide particleboard or MDF meeting the standard for ANSI MR10. Available products include, but are not limited to, the following:
  - 1. Arauco North America; "Duraflake VESTA Moisture Resistant ULEF."
  - 2. Collins Pine; "FreeForm."
  - 3. Georgia-Pacific Building Products; "Ultrastock MR MDF."
  - 4. Roseburg Forest Products; "Skyblend MR-10."
  - 5. Shop-sanded exterior grade veneer core plywood, minimum 5-ply, 3/4-inch thickness.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of reinforcements, and other conditions affecting performance of institutional casework.
  - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Condition casework to average prevailing humidity conditions in installation areas prior to installing.

### 3.3 CASEWORK INSTALLATION

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

- A. Install plumb, level, and true; shim as required, using concealed shims. Where institutional casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.
- B. Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16-inch of a single plane. Fasten cabinets to partition framing, wood blocking, or reinforcements in partitions with fasteners spaced 24 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16-inch.
  - 1. Where base cabinets are not installed adjacent to walls, fasten to floor at toe space with fasteners spaced 24 inches o.c. Secure sides of cabinets to floor, where they do not adjoin other cabinets, with not less than two fasteners.
  - 2. Resilient base at base cabinets (all exposed sides) is specified in Division 9 Section "Resilient Base and Accessories."
- C. Wall Cabinets: Hang cabinets straight, level, and plumb. Adjust fronts and bottoms within 1/16-inch of a single plane. Fasten to masonry, partition framing, blocking, or reinforcements in partitions. Align similar adjoining doors to a tolerance of 1/16-inch.
  - 1. Fasten through back, near top and bottom, at ends, and not more than 16 inches o.c. with fasteners recommended or approved by casework manufacturer for substrates indicated. Wall mounted hanger strips are not acceptable.
- D. Install hardware uniformly and precisely. Set hinges snug and flat in mortises, unless otherwise indicated. Adjust and align hardware so moving parts operate freely and contact points meet accurately. Allow for final adjustment after installation.
- E. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
- F. Present keys to Owner's representative. Label keys by room number and casework type. Obtain receipt from Owner. and turn over to Construction Manager.

### 3.4 INSTALLATION OF TOPS

- A. Field Jointing: Where possible make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
  - 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- B. Secure tops to cabinets with Z-type fasteners or equivalent, using two or more fasteners at each front, end, and back.
- C. Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection.
- D. Secure backsplashes to tops with concealed metal brackets at 16 inches o.c. and walls with adhesive.
- E. Seal junctures of top, splash, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

3.5 INSTALLATION OF SHELVING

- A. Securely fasten adjustable shelving supports to partition framing, wood blocking, or reinforcements in partitions.
- B. Install shelf standards plumb and at heights to align shelf brackets for level shelves. Install shelving level and straight, closely fitted to other work where indicated.

3.6 CLEANING AND PROTECTING

- A. Repair or remove and replace defective work as directed on completion of installation.
- B. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.
- C. Protection: Provide 6-mil plastic or other suitable water-resistant covering over countertop surfaces. Tape to underside of countertop at a minimum of 48 inches o.c. Remove protection at Substantial Completion.

END OF SECTION 123216

SECTION 123623.13 - PLASTIC-LAMINATE-CLAD COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product, including high-pressure decorative laminate and adhesive for bonding plastic laminate.
  - 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: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
  - 1. Show locations and sizes of cutouts and holes for plumbing fixtures and faucets installed in plastic-laminate countertops.
  - 2. Apply AWI Quality Certification Program label to Shop Drawings.
- C. Samples for Initial Selection:
  - 1. Plastic laminates.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and fabricator.
- B. Product Certificates: For each type of product.
  - 1. Composite wood and agrifiber products.
  - 2. High-pressure decorative laminate.
  - 3. Chemical-resistant, high-pressure decorative laminate.
  - 4. Adhesives.
- C. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.
- D. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that 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. Shop is a certified participant in AWI's Quality Certification Program.
- B. Installer Qualifications: Certified participant in AWI's Quality Certification Program.
- C. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

MURRAY ELEMENTARY SCHOOL CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS, VA  
Architect's Project No: 623309

---

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver countertops until painting and similar operations that could damage countertops have been completed in installation areas. If countertops must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 25 and 55 percent during the remainder of the construction period.
- C. Field Measurements: Where countertops are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Established Dimensions: Where countertops are indicated to fit to other construction, establish dimensions for areas where countertops are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE COUNTERTOPS

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades indicated for construction, installation, and other requirements.
  - 1. Provide labels and certificates from AWI certification program indicating that countertops, including installation, comply with requirements of grades specified.
  - 2. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.
- B. Grade: Premium.
- C. High-Pressure Decorative Laminate: NEMA LD 3, Grade HGS.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Abet Laminati, Inc.
    - b. Formica Corporation.
    - c. Lamin-Art, Inc.
    - d. Panolam Industries International, Inc.
    - e. Wilsonart International; Div. of Premark International, Inc. BASIS-OF-DESIGN
- D. Colors, Patterns, and Finishes: Wilsonart, Steel Mesh #4879-60.
  - 1. As selected by Architect from manufacturer's full range in the following categories:

- a. Wood grains, matte finish.
- b. Patterns, matte finish.
- 2. Grain Direction: Parallel to cabinet fronts.
- E. Edge Treatment: 3-mm PVC edging to match laminate cladding on horizontal surfaces.
- F. Core Material: Exterior-grade plywood.
- G. Core Material at Sinks: exterior-grade plywood.
- H. Core Thickness: 3/4 inch (19 mm).
  - 1. Build up countertop thickness to 1-1/2 inches (38 mm) at front, back, and ends with additional layers of core material laminated to top.
- I. Backer Sheet: Provide plastic-laminate backer sheet, NEMA LD 3, Grade BKL, on underside of countertop substrate.

## 2.2 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard unless otherwise indicated.
  - 1. Wood Moisture Content: 5 to 10 percent.
- B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
  - 1. Softwood Plywood: DOC PS 1.

## 2.3 MISCELLANEOUS MATERIALS

- A. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
- B. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

## 2.4 FABRICATION

- A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- B. Fabricate countertops to dimensions, profiles, and details indicated. Provide front and end overhang of 1 inch (25 mm) over base cabinets. Ease edges to radius indicated for the following:
  - 1. Solid-Wood (Lumber) Members: 1/16 inch (1.5 mm) unless otherwise indicated.
- C. Complete fabrication, including assembly, 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.
  - 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
  - 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements before disassembling for shipment.

- D. Shop cut openings to maximum extent possible to receive appliances, plumbing fixtures, 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.
  - 1. Seal edges of openings in countertops with a coat of varnish.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Before installation, condition countertops to average prevailing humidity conditions in installation areas.
- B. Before installing countertops, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

#### 3.2 INSTALLATION

- A. Grade: Install countertops to comply with same grade as item to be installed.
- B. Assemble countertops and complete fabrication at Project site to the extent that it was not completed in the shop.
  - 1. Provide cutouts for appliances, plumbing fixtures, electrical work, and similar items.
  - 2. Seal edges of cutouts by saturating with varnish.
- C. Field Jointing: Where possible, make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
  - 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches (150 mm) of front and back edges and at intervals not exceeding 24 inches (600 mm). Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- D. Install countertops level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- E. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- F. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.
- G. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
  - 1. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
  - 2. Secure backsplashes to tops with concealed metal brackets at 16 inches (400 mm) o.c..
  - 3. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective countertops, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean countertops on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 123623.13

SECTION 220500 - COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. Finished Spaces: Spaces other than mechanical and electrical equipment rooms, furred spaces, pipe chases, unheated spaces immediately below roof, spaces above ceilings, unexcavated spaces, crawlspace, and tunnels.
- B. Exposed, Interior Installations: Exposed to view indoors. Examples include finished occupied spaces and mechanical equipment rooms.
- C. Exposed, Exterior Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions. Examples include rooftop locations.
- D. Concealed, Interior Installations: Concealed from view and protected from physical contact by building occupants. Examples include above ceilings and in chases.
- E. Concealed, Exterior Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- F. The following are industry abbreviations for plastic materials:
  - 1. ABS: Acrylonitrile-butadiene-styrene plastic.
  - 2. CPVC: Chlorinated polyvinyl chloride plastic.
  - 3. PE: Polyethylene plastic.
  - 4. PVC: Polyvinyl chloride plastic.
- G. The following are industry abbreviations for rubber materials:
  - 1. EPDM: Ethylene-propylene-diene terpolymer rubber.
  - 2. NBR: Acrylonitrile-butadiene rubber.

1.3 SUBMITTALS

- A. Product Data: For the following:
  - 1. Transition fittings.
  - 2. Dielectric fittings.
  - 3. Mechanical sleeve seals.

4. Escutcheons.

1.4 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify processes and operators according to AWS D1.1, "Structural Welding Code--Steel."
- B. Steel Pipe Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
  - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
  - 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.
- C. Electrical Characteristics for Plumbing Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

1.6 COORDINATION

- A. Arrange for pipe spaces, chases, slots, and openings in building structure during progress of construction, to allow for plumbing installations.
- B. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- C. Coordinate requirements for access panels and doors for plumbing items requiring access that are concealed behind finished surfaces. Access panels and doors are specified in Division 08 Section "Access Doors and Frames."

1.7 INTENT OF CONTRACT DOCUMENTS

- A. Plumbing drawings are diagrammatic, indicating general locations and arrangements of pipe, and equipment. Not necessarily indicating all offsets, conditions, and appurtenances required to provide clearances for maximum practical accessibility to perform maintenance.

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

- B. Coordinate work in order to achieve proper operation and to provide a maintainable installed condition.
- C. Notify the Architect’s representative immediately of conditions which do not comply or will not produce this result.
- D. Indicated configurations were used to size pipes, pumps, expansion tanks and other devices. Install piping and equipment generally as indicated. Minor deviations are permitted in the course of necessary coordination. Major changes shall be submitted for approval by the Architect’s representative. Additional fittings and offsets not shown on the drawings are expected, anticipated by the design, and shall be provided. If more than 5% of the indicated number of fittings are required or if one change in direction is within six inches of another change in direction and this “Z” shape is not indicated notify the Architect’s representative immediately. Provide necessary additional fittings and offsets. Changes in pipe size shall be made only with written approval from the Architect’s representative.

## PART 2 - PRODUCTS

### 2.1 PIPE, TUBE, AND FITTINGS

- A. Refer to other Division 22 piping sections for pipe, tube, and fitting materials and joining methods.
- B. Pipe Threads: ASME B1.20.1 for factory-threaded pipe and pipe fittings.

### 2.2 JOINING MATERIALS

- A. Refer to individual Division 22 piping sections for joining materials not listed below.
- B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions inside & outside pipe and:
  - 1. ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is otherwise indicated.
    - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
    - b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
  - 2. AWWA C110, rubber, flat face, 1/8-inch-thick, unless otherwise indicated, and full-face or ring type, unless otherwise indicated.
- C. Solder Filler Metals: ASTM B 32, lead-free (95% Tin, 5% Antimony) alloy. Include water-flushable flux according to ASTM B 813.
- D. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.

- E. Welding Filler Metals: Comply with AWS D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.
- F. Solvent Cements for Joining Plastic Piping:
  - 1. ABS Piping: ASTM D 2235.
  - 2. CPVC Piping: ASTM F 493.
  - 3. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.
  - 4. PVC to ABS Piping Transition: ASTM D 3138.

## 2.3 DIELECTRIC FITTINGS

- A. Where piping of dissimilar metals is joined together use yellow brass unions.

## 2.4 SLEEVES

- A. Galvanized-Steel Sheet: 0.0239-inch minimum thickness; round tube closed with welded longitudinal joint.
- B. Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.
- C. Cast Iron: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- D. Stack Sleeve Fittings: Manufactured, cast-iron sleeve with integral clamping flange. Include clamping ring and bolts and nuts for membrane flashing.
  - 1. Underdeck Clamp: Clamping ring with set screws.
- E. Molded PE: Reusable, PE, tapered-cup-shaped, and smooth-outer surface with nailing flange for attaching to wooden forms.

## 2.5 ESCUTCHEONS

- A. Description: Manufactured wall and ceiling escutcheons and floor plates, with an ID to closely fit around pipe, tube, and insulation of insulated piping and an OD that completely covers opening.
- B. One-Piece, Deep-Pattern Type: Deep-drawn, box-shaped brass with polished chrome-plated finish.
- C. One-Piece, Cast-Brass Type: With set screw.
  - 1. Finish: Polished chrome-plated.
- D. Split-Casting, Cast-Brass Type: With concealed hinge and set screw.
  - 1. Finish: Polished chrome-plated.

- E. One-Piece, Floor-Plate Type: Cast-iron floor plate.
- F. Split-Casting, Floor-Plate Type: Cast brass with concealed hinge and set screw.

## 2.6 GROUT

- A. Description: ASTM C 1107, Grade B, non-shrink and nonmetallic, dry hydraulic-cement grout.
  - 1. Characteristics: Post-hardening, volume-adjusting, non-staining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
  - 2. Design Mix: 5000-psi, 28-day compressive strength.
  - 3. Packaging: Premixed and factory packaged.

## PART 3 - EXECUTION

### 3.1 PLUMBING DEMOLITION

- A. Refer to Division 2 Sections "Site and Selective Demolition" for general demolition requirements and procedures.
- B. Disconnect, demolish, and remove plumbing systems, equipment, and components indicated to be removed.
  - 1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
  - 2. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
  - 3. Equipment to Be Removed: Remove equipment and associated piping back to main unless otherwise indicated. Cap services.
  - 4. Equipment to Be Removed and Reinstalled: Disconnect and cap services. Remove, clean, and store equipment. When appropriate, reinstall, reconnect, and make equipment operational.
  - 5. Equipment to Be Removed and Salvaged: Remove equipment and associated piping back to main unless otherwise indicated. Cap services. Remove equipment, clean, and store as directed (May be off-site). Make available to owner at time of the owner’s choosing.
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

### 3.2 PIPING SYSTEMS - COMMON REQUIREMENTS

- A. Install piping according to the following and Division 22 Sections specifying piping systems.

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

- B. Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- E. Install piping to permit valve servicing.
- F. Install piping at the minimum slopes required by authorities having jurisdiction unless otherwise indicated.
- G. Install piping free of sags and bends.
- H. Install fittings for changes in direction and branch connections.
- I. Install piping to allow application of insulation.
- J. Select system components with pressure rating equal to or greater than system operating pressure.
- K. Install escutcheons for penetrations of walls, ceilings, and floors according to the following:
  - 1. Exposed, Interior Installations/Piping with Fitting or Sleeve Protruding from Wall: One-piece, deep-pattern type.
  - 2. Exposed, Interior Installations/Chrome-Plated Piping: One-piece, cast-brass type with polished chrome-plated finish and set-screw.
  - 3. Exposed, Interior Installations/Insulated Piping: One-piece, cast-brass type with polished chrome-plated finish.
  - 4. Exposed, Interior Installations/Bare Piping at Wall and Floor Penetrations in Finished Spaces: One-piece, cast-brass type with finish to match surrounding surfaces.
  - 5. Exposed, Interior Installations/Bare Piping at Ceiling Penetrations in Finished Spaces: One-piece or split-casting, cast-brass type with finish to match surrounding surfaces.
  - 6. Exposed, Interior Installations/Piping in Unfinished Service Spaces: None, provide sealant.
  - 7. Exposed, Interior Installations/Piping in Equipment Rooms: None, provide sealant.
  - 8. Exposed, Interior Installations/Piping at Floor Penetrations in Equipment Rooms, Fan Rooms, or similar wet spaces: None - provide sealant and sleeve extending 2” above floor to prevent liquid leaking to floor below
- L. Sleeves are not required for core-drilled holes.
  - 1. Exception: Exposed, Interior Installations at Floor Penetrations in Equipment Rooms, Fan Rooms, or similar wet spaces.
- M. Permanent sleeves are not required for holes formed by removable PE sleeves.
  - 1. Exception: Exposed, Interior Installations at Floor Penetrations in Equipment Rooms, Fan Rooms, or similar wet spaces.

- N. Install sleeves for pipes passing through walls, floors, or roofs.
  - 1. Cut sleeves to length for mounting flush with both surfaces.
    - a. Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level. Extend cast-iron sleeve fittings below floor slab as required to secure clamping ring.
  - 2. Install sleeves as walls and slabs are constructed.
    - a. PVC Pipe Sleeves: Permitted for pipes smaller than NPS 6 except aboveground, exterior-walls.
    - b. Steel Sheet Sleeves: Permitted for pipes NPS 6 and larger, penetrating gypsum-board partitions except aboveground, exterior-walls.
    - c. Stack Sleeve Fittings: For pipes penetrating floors. Secure flashing between clamping flanges. Install section of cast-iron soil pipe to extend sleeve to 2 inches above finished floor. Seal space outside sleeve fittings with grout.
  - 3. Except for penetrations where mechanical sleeve seals are used, seal annular space between sleeve and pipe or pipe insulation, using joint sealants appropriate for size, depth, and location of joint. Refer to Division 7 Section "Joint Sealants".
- O. Aboveground Exterior Penetrations: Seal penetrations using sleeves and mechanical sleeve seals. Select sleeve size to allow for annular clear space required by the mechanical sleeve seal manufacturer between pipe and sleeve for installing mechanical sleeve seals.
  - 1. Install steel pipe for sleeves smaller than 6 inches in diameter.
  - 2. Install cast-iron "wall pipes" for sleeves 6 inches and larger in diameter.
  - 3. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.
  - 4. Sleeves from an approved sleeve seal manufacturer shall be acceptable.
- P. Underground Exterior Penetrations: Install cast-iron "wall pipes" for sleeves. Seal pipe penetrations using mechanical sleeve seals. Select sleeve size to allow for annular clear space required by the mechanical sleeve seal manufacturer between pipe and sleeve for installing mechanical sleeve seals.
- Q. Mechanical Sleeve Seal Installation: Select type and number of sealing elements required for pipe material and size. Position pipe in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pipe and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.
- R. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Refer to Section "Penetration Firestopping" for materials.

- S. Verify final equipment locations for roughing-in.
- T. Refer to equipment specifications in other Sections of these Specifications for roughing-in requirements.

### 3.3 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and Division 22 Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Soldered Joints: Apply ASTM B 813, water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy complying with ASTM B 32.
- E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- F. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
  - 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
  - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- G. Welded Joints: Construct joints according to AWS D10.12, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- H. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- I. Plastic Piping Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
  - 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
  - 2. ABS Piping: Join according to ASTM D 2235 and ASTM D 2661 Appendixes.
  - 3. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.
  - 4. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
  - 5. PVC Non-pressure Piping: Join according to ASTM D 2855.

- 6. PVC to ABS Non-pressure Transition Fittings: Join according to ASTM D 3138 Appendix.
  
- J. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.
  
- K. Plastic Non-pressure Piping Gasketed Joints: Join according to ASTM D 3212.
  
- L. PE Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.
  - 1. Plain-End Pipe and Fittings: Use butt fusion.
  - 2. Plain-End Pipe and Socket Fittings: Use socket fusion.
  
- M. Fiberglass Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.
  
- N. Mechanical Joints: Prepare pipe ends and fittings, apply coupling, and join according to joint manufacturer's written instructions.

### 3.4 PIPING CONNECTIONS

- A. Make connections according to the following, unless otherwise indicated:
  - 1. Install unions, in piping 2” and smaller, one adjacent to each valve and at final connections to each piece of equipment.
  - 2. Install flanges, in piping NPS 2-1/2” and larger, adjacent to final connections to each piece of equipment.
  - 3. Install dielectric unions or flanges for connections of dissimilar metals.

### 3.5 EQUIPMENT INSTALLATION - COMMON REQUIREMENTS

- A. Install equipment to allow maximum possible headroom unless specific mounting heights are indicated.
  
- B. Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
  
- C. Install plumbing equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference to other installations. Extend grease fittings to accessible locations.
  
- D. Install equipment to allow right of way for piping installed at required slope.

### 3.6 PAINTING

- A. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.7 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Refer to Section "Metal Fabrications" for structural steel.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor plumbing materials and equipment.
- C. Field Welding: Comply with AWS D1.1.

3.8 GROUTING

- A. Mix and install grout for plumbing equipment base bearing surfaces, pump and other equipment base plates, and anchors.
- B. Clean surfaces that will come into contact with grout.
- C. Provide forms as required for placement of grout.
- D. Avoid air entrapment during placement of grout.
- E. Place grout, completely filling equipment bases.
- F. Place grout on concrete bases and provide smooth bearing surface for equipment.
- G. Place grout around anchors.
- H. Cure placed grout.

END OF SECTION 220500

SECTION 224000 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Provisions of the Contract and of the Contract Documents apply to this Section.

1.2 DEFINITIONS

- A. ABS: Acrylonitrile-butadiene-styrene plastic.
- B. FRP: Fiberglass-reinforced plastic.
- C. PMMA: Polymethyl methacrylate (acrylic) plastic.
- D. PVC: Polyvinyl chloride plastic.
- E. RFI: Request for information.
- F. Accessible Fixture: Plumbing fixture that can be approached, entered, and used by people with disabilities.
- G. Cast Polymer: Cast-filled-polymer-plastic material. This material includes cultured-marble and solid-surface materials.
- H. Cultured Marble: Cast-filled-polymer-plastic material with surface coating.
- I. Fitting: Device that controls flow of water into or out of plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, showerheads and tub spouts, drains and tailpieces, and traps and waste pipes.
- J. Solid Surface: Nonporous, homogeneous, cast-polymer-plastic material with heat-, impact-, scratch-, and stain-resistance qualities.
- K. Other Manufacturers: Use one of those listed.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, and security anchors for security plumbing fixtures.
  - 2. Include rated capacities, operating characteristics, and furnished specialties and accessories.
- B. Performance Submittals:
  - 1. Product Data:
    - a. Documentation indicating flow and water consumption requirements.

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For security plumbing fixtures and components to include in maintenance manuals.
- B. Faucet Cartridges, washers, aerators, and O-Rings: Equal to five percent (5%) of amount of each type and size installed but not less than five (5) of each type and size.
- C. Provide Minimum number of key operators (wrenches/tools) for loose key stops, wall hydrants, aerators, security fasteners and any fixture where a key, security fastener, or special tool is required:
  - 1. One (1) for ten percent (10%) of each size or ten (10), whichever is less.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
  - 1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.
- B. Electrical Components, Devices, and Accessories: Electrical components, devices, and accessories shall be listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Regulatory Requirements: Comply with requirements in ICC A117.1, "Accessible and Usable Buildings and Facilities"; Public Law 90-480, "Architectural Barriers Act"; and Public Law 101-336, "Americans with Disabilities Act"; for plumbing fixtures for people with disabilities. Comply with requirements in Public Law 102-486, "Energy Policy Act," regarding water flow and consumption rates for plumbing fixtures.
- D. NSF Standard: Comply with NSF 61, "Drinking Water System Components--Health Effects," for fixture materials that will be in contact with potable water.
- E. EPA WaterSense: Provide fixtures with WaterSense labeling for all applicable and eligible fixtures and accessories.
- F. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.
- G. Comply with the following standards and other requirements where applicable:
  - 1. Enameled, Cast-Iron Fixtures: ASME A112.19.1M.
  - 2. Porcelain-Enameled, Formed-Steel Fixtures: ASME A112.19.4M.
  - 3. Slip-Resistant Bathing Surfaces: ASTM F 462.
  - 4. Solid-Surface-Material Lavatories and Sinks: ANSI/ICPA SS-1.
  - 5. Stainless-Steel Commercial, Handwash Sinks: NSF 2 construction.
  - 6. Stainless-Steel Residential Sinks: ASME A112.19.3.
  - 7. Vitreous-China Fixtures: ASME A112.19.2M.
  - 8. Water-Closet, Flush Valve, Tank Trim: ASME A112.19.5.
  - 9. Water-Closet, Flushometer Tank Trim: ASSE 1037.
  - 10. Whirlpool Bathtub Fittings: ASME A112.19.8M.
  - 11. Backflow Protection Devices for Faucets with Side Spray: ASME A112.18.3M.
  - 12. Backflow Protection Devices for Faucets with Hose-Thread Outlet: ASME A112.18.3M.

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

13. Diverter Valves for Faucets with Hose Spray: ASSE 1025.
14. Faucets: ASME A112.18.1.
15. Hose-Connection Vacuum Breakers: ASSE 1011.
16. Hose-Coupling Threads: ASME B1.20.7.
17. Integral, Atmospheric Vacuum Breakers: ASSE 1001.
18. NSF Potable-Water Materials: NSF 61.
19. Pipe Threads: ASME B1.20.1.
20. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
21. Supply Fittings: ASME A112.18.1.
22. Brass Waste Fittings: ASME A112.18.2.
23. Backflow Protection Devices for Hand-Held Showers: ASME A112.18.3M.
24. Combination, Pressure-Equalizing and Thermostatic-Control Antiscald Faucets: ASSE 1016.
25. Deck-Mounted Bath/Shower Transfer Valves: ASME 18.7.
26. Faucets: ASME A112.18.1.
27. Hand-Held Showers: ASSE 1014.
28. High-Temperature-Limit Controls for Thermal-Shock-Preventing Devices: ASTM F 445.
29. Hose-Coupling Threads: ASME B1.20.7.
30. Manual-Control Antiscald Faucets: ASTM F 444.
31. Pipe Threads: ASME B1.20.1.
32. Pressure-Equalizing-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
33. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
34. Thermostatic-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
35. Atmospheric Vacuum Breakers: ASSE 1001.
36. Brass and Copper Supplies: ASME A112.18.1.
37. Dishwasher Air-Gap Fittings: ASSE 1021.
38. Manual-Operation Flushometers: ASSE 1037.
39. Plastic Tubular Fittings: ASTM F 409.
40. Brass Waste Fittings: ASME A112.18.2.
41. Sensor-Operation Flushometers: ASSE 1037 and UL 1951.
42. Disposers: ASSE 1008 and UL 430.
43. Dishwasher Air-Gap Fittings: ASSE 1021.
44. Flexible Water Connectors: ASME A112.18.6.
45. Floor Drains: ASME A112.6.3.
46. Grab Bars: ASTM F 446.
47. Hose-Coupling Threads: ASME B1.20.7.
48. Hot-Water Dispensers: ASSE 1023 and UL 499.
49. Off-Floor Fixture Supports: ASME A112.6.1M.
50. Pipe Threads: ASME B1.20.1.
51. Plastic Shower Receptors: ANSI Z124.2.
52. Plastic Toilet Seats: ANSI Z124.5.
53. Supply and Drain Protective Shielding Guards: ICC A117.1.
54. Whirlpool Bathtub Equipment: UL 1795.

#### 1.6 COORDINATION

- A. Coordinate all accessories. Ensure items fit and work together as an assembly. Provide additional accessories to accommodate final installed field conditions; to include, but not limited

to, offsets and other items required for ADA compliance. Provide necessary accessories and components for complete installation.

- B. Coordinate roughing-in and final plumbing fixture locations and verify that fixtures can be installed to comply with design.
- C. Model numbers are intended to identify families of fixtures and may be incomplete. Refer to other contract documents for hand.
- D. Where fixtures or its associated components are installed in rated floors, walls, or ceilings; provide rated fixtures, accessories, and components of equal rating.
- E. Where the flush valve assembly height would conflict with the rear grab bar installation (including the minimum 1-1/2” clearance to the bottom of the grab bar), the vacuum breaker flush tube shall be shortened. Shortening of the vacuum breaker flush tube shall not exceed the manufacturer’s requirements for maintaining proper operation, including the CL (critical line) markings on the flush tube if provided by the manufacturer to indicate shortening limitations.

#### 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Faucet Cartridges, washers, aerators, and O-Rings: Equal to 5 percent of amount of each type and size installed but not less than 5 of each type and size.

### PART 2 - PRODUCTS

#### 2.1 (~~SK-1~~) BREAKROOM AND WORKROOM KITCHENETTE SINK (ACCESSIBLE)

- A. Manufacturer & Model Number: Elkay LRADQ221955
  - 1. Overall Length (left to right): 22”
  - 2. Overall Width (front to back): 19-1/2”
  - 3. Inside Bowl Depth: 5-1/2”
  - 4. Material: 18 Gauge Stainless Steel
  - 5. Number of Bowls: 1
  - 6. Drain location: Off-center, rear.
  - 7. Mounting: Inside hole ratchet system equal to Elkay Quick-Clip® mounting system. Systems requiring access from below shall not be permitted.
  - 8. Deck Hole drilling configuration:
    - a. 2 holes, 4” apart, centered.
- B. Faucet: Zurn Z812B1-XL-3F
  - 1. Hole configuration: 3 Hole installation, 8” centers.
  - 2. Spout: 5-3/8” gooseneck limited swing spout.
  - 3. Handles: 2-5/8” levers.
  - 4. Aerator: Vandal resistant, pressure compensating, 0.50 gpm
  - 5. Cartridges: Ceramic or compression ¼ turn.
  - 6. Meets ADA requirements: Yes
  - 7. Other:

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

- a. Red & blue temperature indicators. Red = Hot, blue = cold.
- C. Basket Strainer & Tail Piece: McGuire Part Number 151
  1. Material: Forged brass, chrome plated.
  2. Tailpiece: 1-1/2" x 4" 20 gauge seamless brass, chrome plated.
  3. Nuts: Cast brass lock, slip, and coupling, chrome plated
- D. Trap: McGuire Part Number 8912-C-F
  1. Size: 1-1/2" x 1-1/2"
  2. Material: Polished chrome plated cast brass.
  3. Cleanout plug: Yes
  4. Nuts: Polished chrome plated brass.
  5. Wall bend: 17-gauge seamless tubular chrome plated brass.
  6. Wall flange: Chrome plated brass with setscrew. Where pipe protrudes from wall contractor may provide deep flange.
- E. Supplies: McGuire Part Number 2167-N3-F
  1. Inlet: 1/2" IPS
  2. Outlet: 1/2" OD compression.
  3. Nipple: 1/2" x 3" chrome plated brass.
  4. Wall flange: Heavy brass chrome plated with set-screw
- F. Insulation: Tru-Bro Lav Guard #102
  1. Insulate P-trap, hot and cold angle valves, hot and cold risers.
- G. Other Manufacturers: Provide products, features, and accessories equal to those specified above.
  1. Sink
    - a. Advance Tabco
    - b. Eagle Group
    - c. Elkay
    - d. Just
    - e. Kohler
  2. Faucet:
    - a. Chicago
    - b. Elkay
    - c. Speakman
    - d. Symmons
    - e. T&S Brass
    - f. Zurn
  3. Basket Strainer & Tail Piece:
    - a. Cambridge Brass
    - b. Kohler
  4. Trap:
    - a. Cambridge Brass
    - b. Kohler
  5. Supplies:
    - a. Cambridge Brass
    - b. Chicago
    - c. T&S

2.2 **(SK-2) CLASSROOM SINK WITH BUBBLER (ACCESSIBLE)**

- A. Manufacturer & Model Number: Elkay DRKAD222055C
1. Material: 18 Gauge Stainless Steel
  2. Overall Length (Right to Left): 22”
  3. Overall Width (Front to Back): 19-1/2”
  4. Inside Bowl Depth: 5-1/2”
  5. Mounting: Inside hole ratchet system equal to Elkay Quick-Clip® mounting system. Systems requiring access from below shall not be permitted.
  6. Number of Bowls: 1
  7. Deck Hole drilling configuration: 4 holes, (3) 4” apart centered on faucet ledge for faucet and (1) hole at front (closest to user) of bubbler ledge for bubbler.
- B. Faucet: Elkay LKD2439C
1. Hole configuration: 3 Hole installation, 8” centers.
  2. Spout: 7” gooseneck rigid spout.
  3. Handles: 2-5/8” levers.
  4. Aerator: Vandal resistant, pressure compensating, 1.50 gpm
  5. Cartridges: Ceramic or compression ¼ turn.
  6. Meets ADA requirements: Yes
  7. Other:
    - a. Red & blue temperature indicators. Red = Hot, blue = cold.
    - b. Hot always to rear (away from user) not necessarily left.
- C. Bubbler: Elkay LK1141A
1. Projector Head: Anti-microbial, Flexible.
  2. Metering Valve: ADA compliant
  3. Handle: Tapered, ADA compliant, Metal, Chrome Plated.
  4. Flow Control: 0.7 gpm.
- D. Basket Strainer & Tail Piece: McGuire Part Number 151
1. Material: Forged brass, chrome plated.
  2. Tailpiece: 1-1/2” x 4” 20 gauge seamless brass, chrome plated.
  3. Nuts: Cast brass lock, slip, and coupling, chrome plated
- E. Trap: McGuire Part Number 8912-C-F
1. Size: 1-1/2” x 1-1/2”
  2. Material: Polished chrome plated cast brass.
  3. Cleanout plug: Yes
  4. Nuts: Polished chrome plated brass.
  5. Wall bend: 17-gauge seamless tubular chrome plated brass.
  6. Wall flange: Chrome plated brass with setscrew. Where pipe protrudes from wall contractor may provide deep flange.
- F. Supplies ((3) Two for faucet & one for bubbler): McGuire Part Number 2167-N3-F
1. Inlet: ½” IPS
  2. Outlet: ½” OD compression.
  3. Nipple: ½” x 3” chrome plated brass.
  4. Wall flange: Heavy brass chrome plated with set-screw

MURRAY ELEMENTARY SCHOOL – CASEWORK REPLACEMENT  
ALBERMARLE COUNTY PUBLIC SCHOOLS  
Architect’s Project No: 623309

---

- G. Insulation: Tru-Bro Lav Guard #102
  - 1. Insulate P-trap, hot and cold angle valves, hot and cold risers.
- H. Other Manufacturers: Provide products, features, and accessories equal to those specified above.
  - 1. Sink
    - a. Advance Tabco
    - b. Eagle Group
    - c. Elkay
    - d. Just
    - e. Kohler
  - 2. Bubblers
    - a. Chicago
    - b. Elkay
    - c. Speakman
    - d. T&S Brass
  - 3. Faucet:
    - a. Chicago
    - b. Elkay
    - c. Speakman
    - d. Symmons
    - e. T&S Brass
    - f. Zurn
  - 4. Basket Strainer & Tail Piece:
    - a. Cambridge Brass
    - b. Kohler
  - 5. Trap:
    - a. Cambridge Brass
    - b. Kohler
    - c. McGuire
  - 6. Supplies:
    - a. Cambridge Brass
    - b. Chicago
    - c. Kohler

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine roughing-in for water soil and for waste piping systems and supports to verify actual locations and sizes of piping connections and that locations and types of supports match those indicated, before plumbing fixture installation. Manufacturer's roughing-in data overrides all other indicated data.
- B. Examine walls, floors, and cabinets for suitable conditions where fixtures are to be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FIXTURE INSTALLATION

- A. Assemble fixtures, trim, fittings, and other components according to manufacturers' written instructions.
- B. For wall-hanging fixtures, install off-floor supports affixed to building substrate.
- C. Install back-outlet, wall hanging fixtures onto waste fitting seals and attach to supports.
- D. Install floor-mounting fixtures on closet flanges or other attachments to piping or building substrate.
- E. Install wall-hanging fixtures with tubular waste piping attached to supports.
- F. Install floor-mounting, back-outlet water closets attached to building floor substrate and wall bracket and onto waste fitting seals.
- G. Install counter-mounted fixtures in and attached to casework.
- H. Install fixtures level and plumb according to manufacturers' written instructions and roughing-in drawings.
- I. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.
  - 1. Exception: Use ball valve if stops are not specified with fixture. Refer to Section "Valves".
- J. Install trap and waste piping on drain outlet of each fixture to be directly connected to sanitary drainage system.
- K. Install waste piping on drain outlet of each fixture to be indirectly connected to drainage system.
- L. Install faucet-spout fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- M. Install water supply, flow-control fittings with specified flow rates in fixture supplies at stop valves.
- N. Install faucet, flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.
- O. Install shower, flow-control fittings with specified maximum flow rates in shower arms.
- P. Install traps on fixture outlets.
  - 1. Exception: Omit trap on fixtures with integral traps.
  - 2. Exception: Omit trap on indirect wastes, unless otherwise indicated.
- Q. Install disposer in outlet of sinks indicated to have disposer. Install switch where indicated or in wall adjacent to sink if location is not indicated.
- R. Install hot-water dispensers in back top surface of sink or in counter with spout over sink.
- S. Install escutcheons at piping wall-ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons if required to conceal protruding fittings. Refer to Division 22 Section “Common Work Results For Plumbing” for escutcheons.
- T. Refer to Section "Joint Sealants" for sealant and installation requirements.

- U. Provide connection to automatic lavatories & flush valves as required via low-voltage transformer(s). Mount transformer(s) above accessible ceiling. Connect to local 120V receptacle circuit with disconnect switch adjacent to transformer. All circuitry (including low voltage) shall be run concealed & in conduit. Coordinate connection requirements.

### 3.3 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Connect water supplies from water distribution piping to fixtures.
- C. Connect drain piping from fixtures to drainage piping.
- D. Supply and Waste Connections to Plumbing Fixtures: Connect fixtures with water supplies, stops, risers, traps, and waste piping. Use sizes required to match fixtures. Connect to plumbing piping.
- E. Supply and Waste Connections to Fixtures and Equipment Specified in Other Sections: Connect fixtures and equipment with water supplies, stops, risers, traps, and waste piping. Use size fittings required to match fixtures and equipment. Connect to plumbing piping.
- F. Ground equipment: Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

### 3.4 FIELD QUALITY CONTROL

- A. Verify that installed fixtures are categories and types specified for locations where installed.
- B. Check that fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized for proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.
- E. Install fresh batteries in sensor-operated mechanisms.

### 3.5 ADJUSTING

- A. Replace washers and seals or cartridges of leaking and dripping faucets, stops, and valves.

### 3.6 CLEANING

- A. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Do the following:
  - 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
  - 2. Remove sediment and debris from drains.

3.7 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.
- B. Do not allow use of fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 224000

(c) **Monthly Pay Meeting:**

Section 36 establishes the requirement for a monthly pay meeting which will usually be held at or near the Site. In addition to Owner, A/E and Contractor representatives, the following representatives, at a minimum, should be available to attend portions of the meeting, as applicable or necessary:

- Owner's Project Inspector.
- Contractor's project superintendent.
- A/E representative of each discipline where Work was performed for the current pay request or where Work is projected to be performed in the coming month.
- A representative of each subcontractor who performed work included in the current pay request.
- A representative of each subcontractor who is projected to perform work in the coming month.

The following topics should be included, as a minimum, in the monthly pay meeting:

- (1) Observations of status, quality and workmanship of Work in progress.
- (2) Validation of the Schedule of Values and Certificate for payment.
- (3) Conformance with proposed construction schedule.
- (4) Outstanding Requests for Information, Requests for Clarification and Requests for Proposal.
- (5) Submittals with action pending.
- (6) Status of pending Change Orders.
- (7) Status of Running Punch List items.
- (8) Work proposed for coming pay period.
- (9) Discussions of any problems or potential problems which need attention.

(d) **Other Meetings:**

Requirements for other meetings, such as progress meetings, coordination meetings, preinstallation meetings and/or partnering meetings, may be included in the Contract Documents.

\*\*\*\*\* END OF GENERAL CONDITIONS \*\*\*\*\*