

**PROJECT MANUAL FOR
W.D. WILLIAMS ELEMENTARY WINDOW REPLACEMENT
ARCHITECTURAL DESIGN STUDIO**

RFP# 13-18

**175 Bingham Road, Asheville, NC 28806
Bid Date: Thursday, March 27, 2018 at 3:00 pm**

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Notice of Bid Opportunity
W.D. WILLIAMS ELEMENTARY
WINDOW REPLACEMENT
RFP# 13-18

Sealed proposals from bidders will be received by The Buncombe County Board of Education Administrative Offices at 175 Bingham Road, Asheville, North Carolina 28806 on **March 27, 2018 at 3:00 pm** for single prime contracts for the furnishing of labor, materials, and equipment entering into the selective removal and replacement of existing storefront frames and glazing at W.D. Williams Elementary School.

In accordance with NC General Statutes 143-128, this project will be bid using the single prime system. All proposals shall be lump sum.

Bidders who wish to mail their proposals shall address them to Ms. Tiffany McCants, Purchasing Officer, Buncombe County Schools, 175 Bingham Road, Asheville, North Carolina 28806. To prevent accidental opening, all mailed bids should be clearly marked on the mailer to indicate the project bid, "**BID FOR: RFP# 13-18, W.D. Williams Elementary School Window Replacement. DO NOT OPEN UNTIL 3:00pm, March 27, 2018**".

Complete plans and specifications for this project can be obtained from the Buncombe County Schools website, Bids and Proposals page after March 13, 2018 at <https://www.buncombeschools.org/cms/One.aspx?portalId=92531&pageId=316936>. Questions regarding bidding procedures can be directed to Tiffany McCants, Purchasing Officer, at (828) 255-5891. Questions regarding construction drawings and technical specifications can be directed to the architect, Architectural Design Studio, at (828) 252-0355.

All work shall be performed outside of instructional hours to avoid disruption to school operations, and shall be completed prior to August 15, 2018.

Prospective bidders are strongly encouraged to visit the project site, W.D. Williams Elementary School, 161 Bee Tree Road, Swannanoa, NC 28778. **All guests must check in at main office.**

The Buncombe County Board of Education reserves the unqualified right to reject any and all proposals.

STATE OF NORTH CAROLINA/BUNCOMBE COUNTY SCHOOLS REQUEST FOR PROPOSAL

RFP# 13-18

PROJECT: WINDOW REPLACEMENT AT W.D. WILLIAMS ELEMENTARY SCHOOL

PROJECT DESIGNER: Tim Fierle, Director of Facilities and Planning

USING AGENCY: Buncombe County Schools

ISSUE DATE: 3/14/2018

Sealed Proposals subject to the conditions made a part hereof will be received until 3:00 pm, **Thursday, March 27, 2018** for furnishing all labor, materials, equipment, and services incidental and implied, for completion of the project described herein. At which time bids will be opened and read aloud at 175 Bingham Road, Asheville, NC 28806.

SEND ALL PROPOSALS DIRECTLY TO ONE OF THE ADDRESSES AS SHOWN BELOW:

Buncombe County Schools, Purchasing Division
175 Bingham Road, Asheville, NC 28806

IMPORTANT NOTE: Indicate firm name and RFP number on the front of each sealed proposal envelope or package, along with the date for receipt of proposals specified above.

Direct inquiries concerning this RFP to:

Bidding and document questions: Tiffany McCants, Purchasing Officer Phone: 828-255-5891
Specification/Technical questions: Tim Fierle, Director of Facilities/Planning Phone: 828-255-5916

THE PROCUREMENT PROCESS

The following is a general description of the process by which a firm will be selected to provide services.

1. Request for Proposals (RFP) is issued to prospective contractors.
2. A preproposal conference and/or deadline for written questions is five days prior to due date.
3. Proposals in one original will be received from each offeror in a sealed envelope or package. Each original shall be signed and dated by an official authorized to bind the firm. Unsigned proposals will not be considered.
4. All proposals must be received by the issuing agency not later than the date and time specified on the cover sheet of this RFP.
5. At that date and time the proposals from each responding firm will be opened. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of an offeror's pricing position. Informal proposals (less than \$ 300,000) are confidential until such time that award has been made. Thereafter, the purchasing division will furnish bid tabs upon request.
6. At their option, the evaluators may request oral presentations or discussion with any or all offerors for the purpose of clarification or to amplify the materials presented in any part of the proposal. However, offerors are cautioned that the evaluators are not required to request clarification; therefore, all proposals should be complete and reflect the most favorable terms available from the offeror.
7. Proposals will be evaluated according to completeness, content, experience with similar projects, ability of the offeror and its staff, and cost. Award of a contract to one offeror does not mean that the other proposals lacked merit, but that, all factors considered, the selected proposal was deemed most advantageous to the State.
8. Offerors are cautioned that this is a request for offers, not a request to contract, and the State/Buncombe County Schools reserves the unqualified right to reject any and all offers when such rejection is deemed to be in the best interest of the State.

(NOTE: THIS FORM MUST BE FULLY EXECUTED AND RETURNED FOR CONSIDERATION OF PROPOSAL)

W.D. WILLIAMS ELEMENTARY WINDOW REPLACEMENT

(RFP# 13-18)

DUE DATE: March 27, 2018 by 3:00 PM

By submitting this proposal, the potential contractor certifies the following:

- ** This proposal is signed by an authorized representative of the firm.
- ** It can obtain and submit to the Owner insurance certificates as required within 5 calendar days after notice of award.
- ** The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed cost.
- ** All labor costs, direct and indirect, have been determined and included in the proposed cost.
- ** All taxes have been determined and included in the proposed cost.
- ** The offeror has attended the conference or conducted a site visit and is aware of prevailing conditions associated with performing these services.
- ** The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 45 days (normally less) from the date of the opening, to furnish the subject services for a cost not to exceed:

BASE BID: Window Replacement - Selective removal and replacement of existing storefront frames and glazing at W.D. Williams Elementary School.

\$ _____ dollars and ____/100 \$ _____

ALTERNATE #1: Replacement of Northeast Windows

\$ _____ dollars and ____/100 \$ _____

Attended Pre-Bid Meeting: YES/NO _____

Addendums received and used in computing bid: YES/NO _____ Number of Addendums received: _____

OFFEROR: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NUMBER: _____ FAX: _____

FED ID No: _____ Type & License #: _____

E-MAIL: _____ MBE Status: _____

Principal Place of Business if different from above (See General Information on Submitting Proposals, Item 18.): _____

BY: (Signature) _____ TITLE: _____

DATE: _____ (Typed or Printed name)

End of Proposal Form

GENERAL INFORMATION ON SUBMITTING PROPOSALS

1. **EXCEPTIONS:** All proposals are subject to the terms and conditions outlined herein. All responses shall be controlled by such terms and conditions and the submission of other terms and conditions, price lists, catalogs, and/or other documents as part of an offeror's response will be waived and have no effect either on this Request for Proposals or on any contract that may be awarded resulting from this solicitation. Offeror specifically agrees to the conditions set forth in the above paragraph by signature to the proposal.
2. **CERTIFICATION:** By executing the proposal, the signer certifies that this proposal is submitted competitively and without collusion (G.S. 143-54), that none of our officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and that we are not an ineligible vendor as set forth in G.S. 143-59.1. False certification is a Class I felony.
3. **ORAL EXPLANATIONS:** The State/Buncombe County Schools shall not be bound by oral explanations or instructions given at any time during the competitive process or after award.
4. **REFERENCE TO OTHER DATA:** Only information which is received in response to this RFP will be evaluated; reference to information previously submitted shall not be evaluated.
5. **ELABORATE PROPOSALS:** Elaborate proposals in the form of brochures or other presentations beyond that necessary to present a complete and effective proposal are not desired.

In an effort to support the sustainability efforts of the State of North Carolina we solicit your cooperation in this effort. It is desirable that all responses meet the following requirements:

 - All copies are printed **double sided**.
 - All submittals and copies are printed on **recycled paper with a minimum post-consumer content of 30%** and indicate this information accordingly on the response.
 - Unless absolutely necessary, all proposals and copies should **minimize or eliminate use of non-recyclable or non re-usable materials** such as plastic report covers, plastic dividers, vinyl sleeves, and GBC binding. Three-ringed binders, glued materials, paper clips, and staples are acceptable.
 - Materials should be submitted in a format which allows for **easy removal and recycling of paper materials**.
6. **COST FOR PROPOSAL PREPARATION:** Any costs incurred by offerors in preparing or submitting offers are the offerors' sole responsibility; the State of North Carolina/Buncombe County Schools will not reimburse any offeror for any costs incurred.
7. **TIME FOR ACCEPTANCE:** Each proposal shall state that it is a firm offer which may be accepted within a period of 45 days. Although the contract is expected to be awarded prior to that time, the 45-day period is requested to allow for unforeseen delays.
8. **TITLES:** Titles and headings in this RFP and any subsequent contract are for convenience only and shall have no binding force or effect.
9. **CONFIDENTIALITY OF PROPOSALS:** In submitting its proposal the offeror agrees not to discuss or otherwise reveal the contents of the proposal to any source outside of the using or issuing agency, government or private, until after the award of the contract. Offerors not in compliance with this provision may be disqualified, at the option of the State/Buncombe County Schools, from contract award. Only discussions authorized by the issuing agency are exempt from this provision.
10. **RIGHT TO SUBMITTED MATERIAL:** All responses, inquiries, or correspondence relating to or in reference to the RFP, and all other reports, charts, displays, schedules, exhibits, and other documentation submitted by the offerors shall become the property of the State/Buncombe County Schools when received.
11. **OFFEROR'S REPRESENTATIVE:** Each offeror shall submit with its proposal the name, address, and telephone number of the person(s) with authority to bind the firm and answer questions or provide clarification concerning the firm's proposal.
12. **SUBCONTRACTING:** Offerors may propose to subcontract portions of the work provided that their proposals clearly indicate what work they plan to subcontract and to whom and that all information required about the prime contractor is also included for each proposed subcontractor.
13. **PROPRIETARY INFORMATION:** Trade secrets or similar proprietary data which the offeror does not wish disclosed to other than personnel involved in the evaluation or contract administration will be kept confidential to the extent permitted by NCAC T01:05B.1501 and G.S. 132-1.3 if identified as follows: Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL". Any section of the proposal which is to remain confidential shall also be so marked in boldface on the title page of that section. Cost information may not be deemed confidential. In spite of what is labeled as confidential, the determination as to whether or not it is shall be determined by North Carolina law.

14. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150, Buncombe County Schools invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.

The Contractor agrees in particular to maintain open hiring and employment practices and to receive applications for employment in compliance with all requirements of applicable federal, state and local laws and regulations issued pursuant thereto relating to nondiscriminatory hiring and employment practices. Each Prime Contractor shall undertake an affirmative action program to ensure that no person shall be excluded from participation in any employment activities because of age, sex, race, religion, color, national origin or handicap.

15. **PROTEST PROCEDURES:** If an offeror wants to protest a contract awarded pursuant to this solicitation, they must submit a written request to the Purchasing Officer, Buncombe County Schools, 175 Bingham Road, or PO Box 16771, Asheville, NC 28806. This request must be received by the Purchasing Division within thirty (30) consecutive calendar days from the date of the contract award, and must contain specific sound reasons and any supporting documentation for the protest. NOTE: Contract award notices are sent only to those actually awarded contracts, and not to every person or firm responding to this solicitation. Contract status and award notices are available through the purchasing division or the project designer with contact information as shown on the first page of this solicitation. Offeror's may call to obtain a verbal status of contract award. All protests will be handled pursuant to the North Carolina Administrative Code, Title 1, Department of Administration, Chapter 5, Purchase and Contract, Section 5B.1519.
16. **TABULATIONS:** Offeror's may call the purchasing division to obtain a verbal status of contract award.
17. **VENDOR REGISTRATION AND SOLICITATION NOTIFICATION SYSTEM:** Vendor Link NC allows vendors to electronically register free with the State to receive electronic notification of current procurement opportunities for goods and services available on the Interactive Purchasing System. Online registration and other purchasing information are available on the Internet web site: <http://www.state.nc.us/pandc/>.
18. **RECIPROCAL PREFERENCE:** G.S. 143-59 establishes a reciprocal preference law to discourage other states from applying in-state preferences against North Carolina's resident offerors. The "Principal Place of Business" is defined as the principal place from which the trade or business of the offeror is directed or managed.

NORTH CAROLINA GENERAL CONTRACT TERMS AND CONDITIONS

1. **GOVERNING LAW:** This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina.
2. **SITUS:** The place of this contract, its situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to its validity, construction, interpretation and enforcement shall be determined
3. **INDEPENDENT CONTRACTOR:** The Contractor shall be considered to be an independent contractor and as such shall be wholly responsible for the work to be performed and for the supervision of its employees. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this agreement. Such employees shall not be employees of, or have any individual contractual relationship with the Agency.
4. **KEY PERSONNEL:** The Contractor shall not substitute key personnel assigned to the performance of this contract without prior written approval by the Agency's Contract Administrator. The individuals designated as key personnel for purposes of this contract are those specified in the Contractor's proposal.
5. **SUBCONTRACTING:** Work proposed to be performed under this contract by the Contractor or its employees shall not be subcontracted without prior written approval of the Agency's Contract Administrator/Project Designer. Acceptance of an offeror's proposal shall include any subcontractor(s) specified therein.
6. **PERFORMANCE AND DEFAULT:** If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this agreement, the Agency shall thereupon have the right to terminate this contract by giving written notice to the Contractor and specifying the effective date thereof. In that event, all finished or unfinished deliverable items under this contract prepared by the Contractor shall, at the option of the Agency, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such materials. Notwithstanding, the Contractor shall not be relieved of liability to the Agency for damages sustained by the Agency by virtue of any breach of this agreement, and the Agency may withhold any payment due the Contractor for the purpose of setoff until such time as the exact amount of damages due the Agency from such breach can be determined.
In case of default by the Contractor, the State may procure the services from other sources and hold the Contractor responsible for any excess cost occasioned thereby. The State reserves the right to require performance bond or other acceptable alternative guarantees from successful offeror without expense to the State.

Upon the entering of a judgment of bankruptcy or insolvency by or against the Contractor, the Agency may terminate this contract for cause.

Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations by any act of war, hostile foreign action, nuclear explosion, riot, strikes, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.
7. **TERMINATION:** The Agency may terminate this agreement at any time by 15 days' notice in writing from the Agency to the Contractor. In that event, all finished or unfinished deliverable items prepared by the Contractor under this contract shall, at the option of the Agency, become its property. If the contract is terminated by the Agency as provided herein, the Contractor shall be paid for services satisfactorily completed, less payment or compensation previously made.
8. **AVAILABILITY OF FUNDS:** Any and all payments to the Contractor are dependent upon and subject to the availability of funds to the Agency for the purpose set forth in this agreement.
9. **CONFIDENTIALITY:** Any information, data, instruments, documents, studies or reports given to or prepared or assembled by the Contractor under this agreement shall be kept as confidential and not divulged or made available to any individual or organization without the prior written approval of the Agency.
10. **CARE OF PROPERTY:** The Contractor agrees that it shall be responsible for the proper custody and care of any property furnished it for use in connection with the performance of this contract or purchased by it for this contract and will reimburse the State for loss of damage of such property.
11. **COPYRIGHT:** No deliverable items produced in whole or in part under this agreement shall be the subject of an application for copyright by or on behalf of the Contractor.
12. **ACCESS TO PERSONS AND RECORDS:** The State Auditor shall have access to persons and records as a result of all contracts or grants entered into by State agencies or political subdivisions in accordance with General Statute 147-64.7. The Contractor shall retain all records for a period of three years following completion of the contract.

13. **ASSIGNMENT:** No assignment of the Contractor's obligations nor the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority, the State may:
- Forward the contractor's payment check(s) directly to any person or entity designated by the Contractor, or
 - Include any person or entity designated by Contractor as a joint payee on the Contractor's payment check(s).
- In no event shall such approval and action obligate the State to anyone other than the Contractor and the Contractor shall remain responsible for fulfillment of all contract obligations.
14. **COMPLIANCE WITH LAWS:** The Contractor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements (permits) that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority.
15. **AFFIRMATIVE ACTION:** The Contractor shall take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.
16. **INSURANCE:** During the term of the contract, the contractor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. As a minimum, the contractor shall provide and maintain the following coverage and limits:
- Worker's Compensation -** The contractor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$150,000.00, covering all of Contractor's employees who are engaged in any work under the contract. If any work is subcontracted, the contractor shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.
 - Commercial General Liability - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$2,000,000.00 Combined Single Limit.** (Defense cost shall be in excess of the limit of liability).
 - Automobile - Automobile Liability Insurance,** to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the contract. The minimum combined single limit shall be \$500,000.00 bodily injury and property damage; \$500,000.00 uninsured/under insured motorist; and \$100,000.00 medical payment.

Providing and maintaining adequate insurance coverage is a material obligation of the contractor and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The contractor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the contractor shall not be interpreted as limiting the contractor's liability and obligations under the contract.

The Contractor shall furnish a Certificate of Insurance as proof of the above coverages. Certificate will contain provision that the insurance coverages cannot be canceled, reduced in amount or coverage eliminated without 30 days written notice to the Buncombe County Board of Education. Owner's Protective insurance must list the Buncombe County Board of Education as a "Named Insured" as it's interest may appear. Owner's approval of Certificate of Insurance does not decrease or relieve the contractor's responsibility for maintaining insurance coverage as required in this Request for Proposal.

17. **ADVERTISING:** Contractor agrees not to use the existence of this contract, the name of the agency, or the name of the State of North Carolina as part of any commercial advertising.
18. **ENTIRE AGREEMENT:** This contract and any documents incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This Request for Proposals, any addenda thereto, and the offeror's proposal are incorporated herein by reference as though set forth verbatim.
- All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.
19. **AMENDMENTS:** This contract may be amended only by written amendments duly executed by the Agency and the Contractor.
20. **TAXES:** G.S. 143-59.1 bars the Secretary of Administration from entering into contracts with vendors if the vendor or its affiliates meet one of the conditions of G. S. 105-164.8(b) and refuse to collect use tax on sales of tangible personal property to purchasers in North Carolina. Conditions under G. S. 105-164.8(b) include: (1) Maintenance of a retail establishment or office, (2) Presence of representatives in the State that solicit sales or transact business on behalf of the vendor and (3) Systematic exploitation of the market by media-assisted, media-facilitated, or media-solicited means. By execution of the bid document the vendor certifies that it and all of its affiliates, (if it has affiliates), collect(s) the appropriate taxes.

21. **GENERAL INDEMNITY:** The contractor shall hold and save the State/Buncombe County Schools, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses, with the exception of consequential damages, accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the contractor in the performance of this contract and that are attributable to the negligence or intentionally tortious acts of the contractor provided that the contractor is notified in writing within 30 days that the State/Buncombe County Schools has knowledge of such claims. The contractor represents and warrants that it shall make no claim of any kind or nature against the State's agents who are involved in the delivery or processing of contractor goods to the State. The representation and warranty in the preceding sentence shall survive the termination or expiration of this contract.

CONTRACTOR'S SALES TAX REPORT
 NC State and Local Sales Taxes Paid

Buncombe County Schools

CONTRACTOR: _____ PO#/RFP# 13-18

Address: _____ For Period: _____

Invoice Date	Invoice #	Type of Property	NC Tax 4.75%	County Tax 2.25%	Name of County
		TOTAL	\$	\$	

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of _____, 20____

Signed

Notary Public

My Commission Expires: _____

Print or Type Name of Above & Title

Seal

NOTE:
This certified statement may be subject to audit.

The North Carolina General Assembly has amended the Statute to provide refunds of sales and use tax to local school units in accordance with the provisions of G.S. 105-164. 14(c) effective with tax paid on or after July 1, 1998.

These refunds are to include the "sales and use taxes paid by contractors on building materials, supplies, fixtures and equipment that become a part of or annexed to a building or structure that is owned or leased by the governmental entity and is being erected, altered or repaired for use by the governmental entity (G.S. 105-164.14)."

Sales and Use Tax Technical Bulletin Section 18-2F specifies: "To substantiate a refund claim for sales or use taxes paid on purchases of building materials, supplies, fixtures and equipment by its contractor, the claimant must secure from such contractor certified statements setting forth all of the following information:

- a. the date the property was purchased;
- b. the type of property purchased;
- c. the project for which the property was used;
- d. if the property was purchased in this State, the county in which it was purchased;
- e. if the property was not purchased in this State, the county in which the property was used; and
- f. the amount of sales and use taxes paid.

In the event the contractor makes several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices and the State and local sales and use taxes paid thereon. Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of sales and use tax paid thereon by the contractor. Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant. Any local sales or use taxes must be shown separately from the State sales or use taxes. The contractor's statements must not contain sales or use taxes paid on purchases of tangible personal property purchased by such contractors for use in performing the contract which does not annex to, affix to or in some manner become a part of the building or structure that is owned or leased by a governmental agency and is being erected, altered or repaired for use by a governmental entity as defined by G.S. 105-164.14(c). Examples of property on which sales or use tax has been paid by the contractor and which shall not be included in the contractor's statement are scaffolding, forms for concrete, fuel for the operation of machinery and equipment, tools, repair parts and equipment rentals.

Please read entire specification package. You will be held accountable for all information. NO payment shall be made if specifications are not followed.

Scope: Work shall consist of furnishing all labor, materials, equipment and services, incidental for the completion of work as described herein. All items not specifically mentioned in the specifications, but which obviously are required to make the job complete, shall be included automatically.

Project Description: The work consists of window replacements at W.D Williams Elementary School.

Qualifications: All Bidders must have proper licenses for contractors as required by North Carolina State Law. Prime Contractor must have General Construction license or Specialty Roofing License to comply with State Law for proper licensure for the work specified.

Contractor's Responsibility: The Contractor shall be responsible for the construction site during the performance of the work. The Contractor shall be responsible for any and all damages to persons and property during the performance of the work and shall further provide all necessary safety measures and shall fully comply with all federal state and local laws, building rules, rules and regulations to prevent accidents or injury to persons or property on or about the location of the work site. This is to include OSHA 1910, General Construction, or those regulations mandated by these specifications. Special attention will be made to proper barricading of the work areas due to the work progressing within an actively operating office atmosphere.

Safety Regulations: The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974 Federal Register) which is hereby incorporated in these specifications.

Codes: All work shall be done in accordance with the specifications and shall comply with North Carolina Building Code, Underwriters' Rules and Regulations and Federal, State and Local Regulations covering work of this nature. Whenever drawings or specifications are in excess of such laws, codes and regulations, the specifications shall hold. All equipment shall have U. L. labels attached.

Permits: The Contractor must secure all permits required for the job completion, obtain and deliver to Owner, all certification of inspection issued by the authorities having jurisdiction, with Contractor paying cost of same. Permitting is through the Permitting Division of Buncombe County and Western North Carolina (WNC) Regional Air Quality Agency. **All final certificates must be delivered to owner prior to request for final payment.**

Workers on Job: All employees of the Contractor shall, while on Buncombe County Board of Education property, act in a professional and courteous manner. All workers shall be expected to wear long pants and shirts while on Board property. Also, all employees of the Contractor must "sign in" in the main office upon entering the facility and must "sign out" upon leaving the property. Any employee of the Contractor may be told to leave the property by either the Principal or the Assistant Director, if they do not follow the above procedure. The employee shall be replaced with another at no additional cost to the Buncombe County Board of Education. In accordance with G.S. 14-208.18, all persons who (1) are required to register under the Sex Offender and Public Protection Program AND (2) have been convicted of certain sexually violent offenses or any offense where the victim was under the age of 16 years at the time of the offense are expressly forbidden to knowingly be present on any property owned or operated by the school system, including school buildings, athletic fields, playgrounds, parking lots, school buses, activity buses or other property of any kind for any reason, including attendance at sporting events or other school related functions, whether before, during or after school hours. It is the responsibility of the contractor or vendor that their employees and sub-contractors are in accordance with G.S. 14-208.18.

E-Verify: Contractor shall comply with E-Verify, the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law and as in accordance with N.C.G.S. §64-25 et seq. In addition, to the best of Contractor's knowledge, any subcontractor employed by Contractor as a part of this contract shall be in compliance with the requirements of E-Verify and N.C.G.S. §64-25 et seq.

Equipment and Tools: The Contractor shall use no equipment or tools that are owned by the Buncombe County Board of Education. Also, no employees of the Buncombe County Board of Education shall be utilized by the Contractor except for opening locked doors and giving directions.

Materials: No materials shall be stored on site and the Buncombe County Board of Education is not responsible for any materials, equipment or tools lost or stolen from the site.

Change in the Work: Changes in the work after execution of the purchase order shall be based upon written agreement by the Owner and the Contractor.

Clean Up: The area of work shall be cleaned daily so that the Buncombe County Board of Education shall not incur any additional costs to make the area suitable for the work process. Also, the Contractor shall utilize no trash receptacles or dumpsters owned by the Buncombe County Board of Education. All trash and removed materials shall be properly disposed of off the property.

Performance of Work: All work shall be performed at the highest level of quality. The Owner shall be responsible for determining the quality of work, and may notify the Contractor of same. **ANY WORK COMPLETED THAT IS NOT SUITABLE TO THE OWNER SHALL BE REPEATED BY THE CONTRACTOR AT NO COST TO THE OWNER.** Any damage to existing area or utilities will be the responsibility of the Contractor. **NO EXCEPTIONS.**

The Buncombe County Board of Education reserves the right to reject any or all bids for any or no reason, and to waive informalities.

**BUNCOMBE COUNTY BOARD OF EDUCATION
GUIDELINES FOR RECRUITMENT AND SELECTION OF
MINORITY BUSINESS FOR PARTICIPATION IN SCHOOL CONSTRUCTION
CONTRACTS**

In accordance with G.S. 143-128, these guidelines establish goals for minority participation in single-prime and separate-prime school construction contracts. The legislation provides that public bodies shall have a verifiable percentage goal for participation by minority businesses in the total value of work for each project for which a contract or contracts are awarded. These guidelines are published to accomplish that end.

SECTION 1: INTENT AND APPLICATION OF GUIDELINES.

It is the intent of these guidelines that The Buncombe County Board of Education as awarding authority for school construction projects, and the contractors and subcontractors performing the construction contracts awarded, shall cooperate and in good faith do all things legal, proper and reasonable to achieve the verifiable goal of 10% for participation by minority businesses in each construction project. Nothing contained in these guidelines shall be construed to require awarding authorities to award contracts to or to make purchase of materials or equipment from minority-business contractors who do not submit the lowest responsible bid or bids.

These guidelines shall apply to all contractors for the erection, construction, alteration, or repair of any buildings or other construction projects when the entire cost of such work shall exceed \$100,000.

SECTION 2: DEFINITIONS.

1. Minority - a person who is a citizen or lawful permanent resident of the United States and who is:
 - a. Black, that is, a person having origins in any of the black racial groups in Africa;
 - b. Hispanic, that is, a person of Spanish or Portuguese culture with origins in Mexico, South or Central America, or the Caribbean Islands, regardless of race;
 - c. Asian American, that is, a person having origins in any of the original peoples of the Far East, Southeast Asia and Asia, the Indian subcontinent, the Pacific Islands;
 - d. American Indian or Alaskan Native, that is, a person having origins in any of the original peoples of North America; or
 - e. Female.

2. Minority Business - means a business:
 - a. In which at least fifty-one percent (51%) is owned by one or more minority persons, or in the case of a corporation, in which at least fifty-one percent (51 %) of the stock is owned by one or more minority persons; and

- b. Of which the management and daily business operations are controlled by one or more of the minority persons who owns it.
3. Owner - The Buncombe County Board of Education.
4. Bidder - Any person, firm, partnership, corporation, association, or joint venture seeking to be awarded a public contract or subcontract.
5. Contract - A mutually binding legal relationship, or any modification thereof obligating the Contractor to furnish labor, equipment, materials, or services for the erection, construction, alteration, or repair of any buildings or other construction projects and obligating the Owner to pay for them.
6. Contractor - Any person, firm, partnership, corporation, association, or joint venture which has contracted with the Owner to perform a Contract to which these guidelines apply.
7. Subcontractor - Any person, firm, partnership, corporation, association, or joint venture under contract with a Contractor for supplying materials or labor, equipment, materials, or services. The subcontractor may or may not provide materials in his subcontract. Work subcontracted in an emergency and which could not have been anticipated is excluded as part of this program.
8. Verifiable goal means:
 - a. For purpose of separate-prime contract system, that the Owner has adopted written guidelines specifying the actions that will be taken to ensure a good faith effort in the recruitment and selection of minority businesses for participation in contracts awarded; and
 - b. For purposes of single-prime contract system, that the Owner has adopted written guidelines specifying the actions that the prime contractor must take to ensure good faith effort in the recruitment and selection of minority businesses for participation in contracts awarded; the required actions must be documented in writing by the contractor to the Owner.

SECTION 3: RESPONSIBILITIES.

1. Minority Business Development Agency of the Small Business Development Division, North Carolina Department of Economic & Community Development (hereafter referred to as Minority Business Development Agency). The Minority Business Development Agency will establish a program in which it will certify to interested persons businesses which qualify as Minority Business Enterprises (MBE). The Minority Business Development Agency will be responsible for the following:

- a. Determine MBE certification, ie. that those certified are MBEs under GS 143-128 as a contractor and/or subcontractor.
- b. Identify those areas of work for which there are certified MBEs, as requested.
- c. Provide interested parties with a list of prospective certified MBE contractors and subcontractors.
- d. Assist in the determination of technical assistance in the certification program that needs to be provided.

In addition to being responsible for the participation of those small and emerging business that want to participate in the construction program, the Minority Business Development Agency will:

- 1) Maintain a current list of certified MBEs. The list shall include the areas of work in which each MBE is interested.
- 2) From information furnished by the Owner publicize the contracting and subcontracting opportunities available for each construction project being advertised.
- 3) Work with the North Carolina Association of Minority Businesses and the Carolinas Branch of the Association of General Contractors in developing and implementing a certification program intended to improve the ability of MBEs to compete in this program.

2. Owner/Buncombe County Board of Education: Under the single-prime contract system and the separate-prime contract system, the Owner will be responsible for,,_ the following:

- a. For contracts in excess of \$500,000 in estimated costs, furnish to the Minority Business Development Agency, the Asheville-Buncombe Community Relations Council, and YMI, Inc., of Asheville a minimum of twenty-one (21) days prior to the bid opening the following:
 1. Project description and location;
 2. Locations where bidding documents may be reviewed;
 3. Name of representative of the Owner who can be contracted during the advertising period to advertise who the prospective bidders are;
 4. Date, time, and location of the bid opening; and
 5. Date, time, and location of pre-bid conference, if scheduled.

The twenty-one (21) day advance time period may be reduced to ten (10) days for contracts in the range of \$100,000 to \$500,000 in estimated cost.

- b. The Owner Will request that the Minority Business Development Agency, the Asheville-Buncombe Community Relations Council, and YMI, Inc. notify MBEs of construction projects.

- c. The pre-bid conference, if scheduled, conducted by the representative of the Owner, will be open to all known and anticipated prime contracts, subcontractors, material suppliers, and other bidders. During the conference, this program, including the bidders' responsibilities, will be fully explained.
- d. The Owner will be responsible for reviewing the spent low bidders compliance with the items listed in the proposal that must be complied with if the bid is to be considered responsive and responsible. The Owner reserves the right to reject any and all bids and to waive informalities.
- e. Attend the scheduled prebid conference.
- f. Identify or determine the work areas of a contract where MBEs may have an interest in performing contract work.
- g. At least ten (10) days prior to the scheduled day of bid opening, the Owner will notified certified MBEs in the area of the project of potential contracting opportunities listed in the proposal. The notification will include the following:
 - 1. A description of the work for which the bid is being solicited.
 - 2. The date, time, and location where bids are to be submitted.
 - 3. The name of a representative of the Owner who will be available to answer questions about the Project.
 - 4. Where bid documents may be received.
 - 5. Any special requirements that may exist, such as insurance, licenses, bonds and financial arrangements.

If there are more than three certified MBEs in the area of the Project, the Owner shall notify three, but may contact more, if the Owner so desires.

- h. Maintain documentation of any contacts, correspondence, or conversations with MBE firms made in an attempt to meet the goals.

3. Prime Contractor(s)

Under the single prime contract system the prime contractor will:

- a. Attend the scheduled pre-bid conference.
- b. Identify or determine those work areas of a subcontract where MBEs may have an interest in performing subcontract work.

- c. At least ten (10) days prior to the schedule day of bid opening, notify certified MBEs of potential subcontracting opportunities listed in the proposal. The notification will include the following:
 - 1) A description of the work for which the subbid is being solicited.
 - 2) The date, time, and location where subbids are to be submitted.
 - 3) The name of the individual within the company who will be available to answer questions about the project.
 - 4) Where bid documents may be reviewed.
 - 5) Any special requirements that may exist, such as insurance, licenses, bonds, and financial arrangements.

If there are more than three (3) certified MBEs in the area of the project, the contractors shall notify three (3), but may contact more, if the contractors so desires.

- d. During the bidding process, comply with the Owner's requirements listed in the contract documents for minority participation.
- e. Submit with the bid a description of that portion of the work to be executed by MBEs expressed as a percentage of the total contract price.
- f. Upon being named the apparent low bidder, provide the necessary documentation as listed in the contract documents provided by the Owner. Failure to comply with procedural requirements as defined in contract documents may render the bid as nonresponsive and may result in rejection of the bid and award to the next lowest responsible and responsive bidder.
- g. During the construction of a project, if it becomes necessary to replace an MBE subcontractor, advise the Owner.
- h. If during the construction of a project additional subcontracting opportunities become available, make a good faith effort to solicit bids from MBES.

4. MBE Responsibilities:

While MBE's are not required to become certified in order to participate in this program, it is recommended that they become certified and should take advantage of the appropriate technical assistance that is made available. In addition, MBE's who are contacted by the Owner or bidders should respond promptly whether or not they wish to submit a bid.

SECTION 4: DISPUTE PROCEDURES.

It is the policy of the Buncombe County Board of Education that disputes with another person that involve a person's rights, duties, or privileges, should be settled through informal procedures. To that end, MBE disputes arising under these guidelines should be resolved, if possible, by informal proceedings arranged by the Superintendent or his designee.

SECTION 5: EFFECTIVE DATE

These guidelines are effective on December 15, 1989.

Copies of these guidelines may be obtained from the Office of the Superintendent at 175 Bingham Road, Asheville, North Carolina, NC 28806; telephone number 828-255-5916.

SECTION 6: GUIDELINES AND COMPLIANCE DOCUMENTATION TO BE PART OF CONTRACT DOCUMENTS.

These guidelines will be included in the contract to each construction bid package and provisions for documenting contractual compliance in providing for MBE participation in the construction program %, Will be included in each construction bid package

**ADDITION TO SUPPLEMENTARY
GENERAL CONDITIONS**

APPLICATION:

The requirements of the Buncombe County Board of Education Guidelines for Recruitment and Selection of Minority Businesses for Participation in School Construction Contracts are hereby made a part of these contract documents. These requirements shall apply to all contractors regardless of ownership. A copy of the Buncombe County Board of Education Guidelines for Recruitment and Selection of Minority Businesses for Participation in School Construction Contracts is attached.

MBE SUBCONTRACT GOALS:

The goals for participation by Minority firms as subcontractors on this project have been set by the Buncombe County Board of Education (hereinafter Board) at 10%.

The bidder must identify on MBE Form 1, the businesses that will be utilized on the project with corresponding total dollar value of the bid and affidavit (Affidavit A) listing good faith efforts **or** affidavit (Affidavit B) of self-performance of work, if bidder will perform work under contract by its own workforce, as required by G.S. 143-128.2(c) and G.S. 143-128.2(f).

The lowest responsible, responsive bidder must provide Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the applicable goal.

OR

Provide Affidavit C, that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, **with documentation of Good Faith Effort, if the percentage is not equal to the applicable goal.**

OR

Provide Affidavit B, which includes sufficient information for the State to determine that the bidder does not customarily subcontract work on this type project.

The above information must be provided as required. Failure to provide this evidence may result in rejection of the bid and award to the next low bidder.

MINIMUM COMPLIANCE REQUIREMENTS:

If the MBE subcontract goals are not achieved, the Bidder shall provide the following documentation to the Board.

1. MBE Utilization Commitment (MBE Form 1) with the bid.

2. Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions (upon request prior to award). This documentation shall include the following evidence:
 - A. Copies of solicitations for quotes to at least three (3) MBE firms from the source list provided by the Minority -Business Development Agency of the Small Business Development Division, North Carolina Department of Economic & Community Development (hereinafter Minority Business Development Agency) for each subcontract to be let under this contract (if 3 or More firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
 - B. Copies of quotes or responses received from each firm responding to the solicitation.
 - C. A telephone log of follow-up calls to each firm sent a solicitation.
 - D. For subcontracts where an MBE firm is not considered to be the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
 - E. Documentation of any contacts, correspondence or conversation with MBE firms made in an attempt to meet the goals.

Note: If the Bidder provides sufficient evidence (listed in #1) that the goals stated in the contract documents have been met, or awards all subcontracts to MBE'S, the documentation listed in #2 will not be required.

Upon being named apparent low bidder, the Bidder shall provide a Letter of Intent (MBE) Form 3), complete with a description of the scope of services and dollar value from each MBE firm proposed for use in this contract. Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder. The Board reserves the right to waive any irregularities in MBE documentation if they can be resolved prior to award of the contract, and the Board finds it to be in its best interest to do so and award the contract.

SUBCONTRACTOR PAYMENT REQUIREMENTS:

North Carolina General Statute 143-134. 1, states that the percentage of retainage on payment made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the Board to the prime contractor. Failure to comply with this provision shall be considered a breach of the contract, and the contract may be terminated in accordance with the termination provisions of the contract.

The Contractor shall provide an itemized statement of payments to each MBE subcontractor with each request for payment or before final payment is processed.

PROGRAM COMPLIANCE REQUIREMENTS:

All written statements, certification or intentions made by the Bidder shall be come a part of the agreement between the Contractor and the Board for performance of this contract. Failure to comply with any of the these states, certifications, or intentions, or with the MBE Guidelines shall constitute a breach of the contract. A finding by the Board that any information submitted either prior to award of the contract or during the performance of the contract is inaccurate, false or incomplete, shall also constitute a breach of the contract. Any such breach may result in termination of the contract in accordance with the termination provisions contained in the contract. It shall be solely at the option of the Board whether to terminate the contract for breach.

In determining whether a contractor has made good faith efforts, the Board will evaluate all efforts made by the Contractor and will determine compliance in regard to quantity, intensity, and results of there efforts. The Board may take into account any or all of the following:

1. Whether the Bidder attended any prebid meetings that were scheduled by the Board;
2. Whether the Bidder advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
3. Whether the Bidder provided written notice to a minimum of three MBE's for each portion of the work subcontract, that their interest in the contract was being solicited in sufficient time to allow the MBE's to participate effectively;
4. Whether the Bidder followed up initial solicitations of interest by contacting MBE's to determine with certainty whether the MBE's were interested;
5. Whether the Bidder selected portions of the work to be performed by MBE's in order to increase the likelihood of meeting MBE goals (including, where appropriate, breaking down contracts into economically feasible units to facilitate MBE participation);
6. Whether the Bidder provided interested MBE's with adequate information about the plans, specifications and requirements of the contract;
7. Whether the Bidder negotiated in good faith with interested MBE's not rejecting MBE's as unqualified without sound reasons based on a thorough investigation of their capabilities.

FORM 1

Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid

Identification of Minority Business Participation

I, _____,
(Name of Bidder)

do hereby certify that on this project, we will use the following minority business enterprises as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone # **Work type** ***Minority Category**

Firm Name, Address and Phone #	Work type	*Minority Category

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

The total value of minority business contracting will be (\$)_____.

State of North Carolina AFFIDAVIT A – Listing of the Good Faith Effort

County of _____

(Name of Bidder)

Affidavit of _____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative code 30 1.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 – (10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 – (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

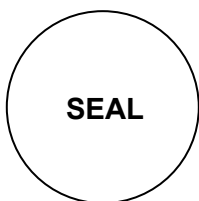
The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d). Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____
Subscribed and sworn to before me this _____ day of _____ 20____
Notary Public _____
My commission expires _____

Section 000003

Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid

**State of North Carolina --AFFIDAVIT B - Intent to Perform Contract
with Own Workforce.**

County of _____

Affidavit of _____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

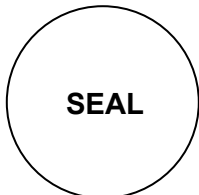
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____
Subscribed and sworn to before me this _____ day of _____ 20 ____
Notary Public _____
My commission expires _____

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by Minority Firms

County of _____

(Note: this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by minority businesses as defined in GS143-128.2(g) is equal to or greater than 10% of the bidders total contract price then the bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

(Project Name)

Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), Socially and Economically Disadvantaged (D)

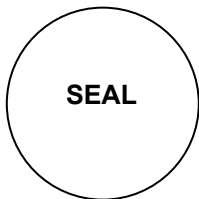
Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20 _____

Notary Public _____

My commission expires _____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note: this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

(Project Name)

Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required.)

Name and Phone Number	*Minority Category	Work description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**), American Indian (**I**), Female (**F**), Socially and Economically Disadvantaged (**D**)

Examples of documentation include, but are not limited to, the following evidence:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster.
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

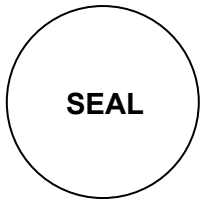
Section 000003

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20 _____

Notary Public _____

My commission expires _____

**APPENDIX E
MBE DOCUMENTATION FOR CONTRACT PAYMENTS**

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

SCO Project ID: _____

Pay Application #: _____ Period: _____

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

MBE FIRM NAME	* TYPE OF MBE	AMOUNT PAID THIS MONTH (With This Pay App)	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

*Minority categories: Black (B), Hispanic (H), Asian American (AA), American Indian (AI), White Female (WF), Socially and Economically Disadvantaged (SED), Disabled (D)

Approved/Certified By: _____

Name

Title

Date

Signature

SUBMIT WITH EACH PAY REQUEST - FINAL PAYMENT - FINAL REPORT

FINAL CERTIFICATE AND RELEASE

FROM: _____

TO: **THE BUNCOMBE COUNTY BOARD OF EDUCATION**

REFERENCE: Contract entered into the _____ day of _____, 20_____, between the Buncombe County Board of Education, hereinafter called the Board, and _____, hereinafter called the Contractor, for the project entitled W.D. Williams Elementary - Window Replacement.

KNOW ALL MEN BY THESE PRESENTS:

1. The Contractor hereby certifies that there is due and payable under the contract and all change orders and modifications thereof the sum of _____ as final payment.
2. The Contractor further certifies that there are no outstanding or unsettled claims or items in addition to the amount set forth in paragraph 1 hereof which it claims are just and due and owing by the Board to the Contractor.
3. The Contractor further certifies that all work required under this contract, including work required under all change orders and modifications, has been performed in accordance with the terms thereof, and that there are no claims of laborers, materialmen, mechanics, subcontractors or sub-subcontractors for unpaid monies or wages arising out of the performance of this contract.
4. Except for the amount stated in paragraph 1 hereof, the Contractor has received from the Board all sums of money payable to the Contractor under or pursuant to the aforementioned contract, change orders, modifications, change directives, claims, demands or otherwise.
5. That in consideration of the payment of the amount stated in paragraph 1 hereof, the Contractor does hereby release the Board and the Board's past, present and future members, officers, employees and agents, and their respective assigns, successors, heirs and representatives from any and all claims, demands, rights, claims of lien, damages, suits, and causes of action, both legal and equitable, which the Contractor has, might now have, or that subsequently may accrue to it, arising under, growing out of, or in any wise connected with the Contract above referred to and the construction project referred to above.

FINAL CERTIFICATE AND RELEASE (Continued)

IN WITNESS WHEREOF, the Contractor has caused this Final Certificate and Release to be executed by its duly authorized officers and its seal to be hereunto affixed, all by authority duly given, this _____, day of _____, 20_____. It is the act and intent of the Contractor that this document be executed under seal.

BY _____

ATTEST:

STATE OF _____

COUNTY OF _____

I, a Notary Public of the State of _____, County of _____, do hereby certify that _____ personally appeared before me this day and, being first duly sworn to oath, deposed and said that he is the _____ of _____, and that he has read the foregoing Final Certificate and Release and that the matters and things stated therein are, to the best of his knowledge and belief, true and that by authority duly given and as the act of _____,

(Company or Corporation)

the foregoing instrument was signed in its name by him as its _____ President, sealed with its corporate seal, and accepted by its _____ Secretary.

WITNESS my hand and Notarial Seal, this _____ day of _____, 200_____.

My Commission Expires:

NOTARY PUBLIC

**W.D. WILLIAMS ELEMENTARY
WINDOW REPLACEMENT
RFP #13-18**

161 Bee Tree Road, Swannanoa, NC 28778

February 27, 2018



Architectural Design Studio
70 Wall Street, Asheville, NC 28801

PROJECT TITLE PAGE

PROJECT MANUAL

for

**W.D. WILLIAMS ELEMENTARY - WINDOW REPLACEMENT
BUNCOMBE COUNTY SCHOOLS RFP #13-18**

OWNER

**Buncombe County Schools
Asheville, North Carolina**

ARCHITECT

**Architectural Design Studio, P.A.
70 Wall Street
Asheville, North Carolina, 28801**

February 27, 2018

END OF PROJECT TITLE PAGE

SECTION 01 0000
GENERAL REQUIREMENTS

DIVISION 1 – GENERAL REQUIREMENTS

A. PROJECT IDENTIFICATION

1. General: This Project Manual includes specifications for W.D. Williams Elementary - Window Replacement as shown on the contract documents prepared by Architectural Design Studio, P.A. Drawings and specifications are dated February 27, 2018.
2. The Owner may, at his discretion, award other separate contracts for work on the site while the work being performed under the contracts listed above is in progress. Contractors shall coordinate their work with all other contractors who may be working at the site and shall fully cooperate with them.

B. CONSTRUCTION TIME

1. The Contractor shall commence construction work to be performed under this agreement on a date to be specified in a written order from the Architect, but no later than June 14, 2018, with all work being substantially complete by August 15, 2018. Final completion of all work shall be obtained within fifteen (15) calendar days of substantial completion.
2. Time is of the essence with respect to this contract and a material consideration thereof. For each day in excess of the above number of days, the Contractor shall pay the Owner the amount of **Two Hundred Fifty Dollars (\$250)** as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the Owner should the Contractor fail to complete the Work within the time specified.
3. Dates given are to Final completion. Final completion shall be defined as the date of acceptance by the Owner but in no case shall occur prior to completion of all punch list items. See General Conditions and Supplementary Conditions of the Contract, regarding construction schedule, delays, damages due to delays and extensions of time.

C. COMMUNICATIONS

1. General: Construction communications shall be made in writing. As a general rule, all communications shall be made through the architect and the architect will communicate construction directives and information only through the general contractor's designated representative for communications.
2. Email: Email may be utilized for time sensitive communications such as field reports, weather reports, RFI's, shop drawings, discoveries in the field, coordination of meeting schedules, construction conference reminders, changes in scheduled meetings, proposed changes etc.

D. PHASING OF THE WORK

1. General: The contractor shall phase the work to minimize disruption of school activities. Weekend and evening work may be required to fulfill the requirement for Owner use during construction. The Contractor shall coordinate utility interruptions giving not less than 7 days first notice and 72 hour second notice.

E. SUBCONTRACTORS AND SUPPLIERS

1. The successful bidders shall, after contract award, submit to the Architect for review the names of all subcontractors and major suppliers he proposes to employ and the branches of work they will perform.

F. CONSTRUCTION CONFERENCES

1. A preconstruction conference will be held immediately upon execution of contracts. The preconstruction conference will be held at a mutually agreeable site for the purpose of verifying general construction procedures, expediting the handling of shop drawings and schedules, and to establish a working understanding between all parties concerned. Present at the conference shall be a responsible representative of the Contractor, the job superintendent, and representatives of the Owner and Architect. The time of the conference shall be agreed upon by all parties.

2. The contractor shall notify the architect in writing 45 days prior to a requested Final Inspection. A Closeout Conference will be scheduled 30 days prior to the anticipated Final Inspection.

G. PROJECT RECORD DOCUMENTS

1. Record Drawings: During the entire construction period, the Contractor shall maintain a clean set of drawings for recording as-built conditions where they differ from the layout details shown on the drawings. Such changes in the work shall be recorded by the Contractor as they occur and shall be kept current and reviewed at each construction conference. Monthly payments to Contractor will be withheld in the absence of up to date record drawings.

H. PROGRESS AND SCHEDULING

1. The Contractor shall carry out the work as expeditiously as possible, planning ahead and scheduling work with subcontractors and material dealers to avoid conflicts and delays. Samples and shop drawings shall be submitted in sufficient time to permit checking, returning for correction if necessary, and resubmitted, and ordering of material.

I. CONSTRUCTION SCHEDULE

1. Bar-Chart Schedule: The Contractor shall prepare a fully developed, horizontal bar chart type Contractor's construction schedule detailing how the work will be accomplished. Submit within 15 days of the date of Notice to Proceed. No payment will be made until an approved schedule has been prepared.
2. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner and other parties required to comply with schedule dates. When revisions are made, distribute to the same parties.
3. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.
4. Approval: Initial construction schedule and schedule updates shall be approved by the Owner.

J. SCHEDULE OF VALUES

1. The Contractor shall coordinate preparation of the Schedule of Values with preparation of the Construction Schedule.
2. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 14 days before the date scheduled for submittal of initial Application for Payment. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values. Provide a detailed breakdown of the Contract Sum to facilitate continued evaluation of Applications for Payment and progress reports. Break subcontracts and work categories into line items to shop materials, equipment and labor costs. Round amounts off to the nearest whole dollar. The total shall equal the Contract Sum.
3. Allowances: Show separate line items for each Allowance.
4. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Application of Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.
5. At the Prime Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.
6. Schedule Updating: When Change Orders or Construction Change Directives result in a change to the Contract Sum, add these to the Schedule of Values as a separate line item.
7. Approval: Schedule of Values shall be approved by the Owner.

END OF SECTION

SECTION 01 1000
SUMMARY OF WORK

PART 1 GENERAL**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, Division 1 Specification Sections and addenda apply to this Section.
- B. Section 01 1400 - Work Restrictions.
- C. Section 01 2300 - Work designated as bid alternates.

1.02 PROJECT INFORMATION

- A. Project Name: This Project Manual includes specifications for W.D. Williams Elementary - Window Replacement.
- B. Project Locations: 161 Bee Tree Road, Swannanoa, NC 28778.
- C. Owner: Buncombe County Board of Education
- D. Architect: Architectural Design Studio, Mike Cox, FAIA.
- E. Project Description:
 - 1. General: The Project generally consists of selective removal and replacement of existing storefront frames and glazing at W.D. Williams Elementary School.

1.03 CONTRACT DESCRIPTION

- A. Contract Type: Single prime contract(s) based on competitive bid as described in Instructions to Bidders.

1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing school buildings during the entire construction period.
- B. Owner intends to occupy the Project upon Final Completion.
- C. Interruption of building access, services, and function by the Contractor is not permitted without prior approval from the Owner.
- D. Allow the Owner occupancy and access to the facility by the public throughout the construction period. Maintain the existing buildings in a weathertight condition throughout the construction period. Repair damage caused by construction operations without additional cost to the Owner. Take all precautions necessary to protect the buildings, their occupants and their contents during the construction period.
- E. Construction operations and methods shall not adversely affect the Owner's working environment.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Contractor's use of premises is limited by the Owner's ongoing use of the school, right to perform work, and right to employ other contractors on portions of the Project. Cooperate with Owner to minimize disruption of owner operations, and to avoid disruption to instruction, safety or security.
- B. Limits of Construction: Confine construction operations to areas indicated in the plans and as agreed to in the pre-construction conference.
 - 1. Parking: The Contractor will be assigned limited parking spaces at each campus.
 - 2. Ancillary Areas: Locations for a dumpster, materials lay-down storage will be as agreed upon in the pre-construction conference. There will be no construction trailer. Damage to landscaped, grassed or paved areas shall be repaired to the Owner's satisfaction.
- C. Provide access to and from site as required by law and by Owner:

1. Emergency egress from occupied spaces shall be routed, maintained and signed by the Contractor. Contractor shall initiate coordination efforts with the Fire Marshall to obtain an approved plan for separation of construction activities and maintenance of the path of egress throughout construction.
 2. Keep existing driveways, walkways and entrances serving the premises clear and available to the Owner, his employees, students, visitors and emergency personnel at all times. Do not use these areas for parking or storage of materials.
- D. Existing building spaces may not be used for storage.
- E. Time Restrictions: Access for construction will be granted at any time that staff are present at the school. Generally, construction work may be performed from 3 PM to 9 PM Monday through Friday when school is in session. Work will be limited to 8 AM to 4 PM during summer break and holidays. Exceptions may be arranged if agreed to in advance by the Owner.
- F. After-Hours Access: The Owner may issue a key or security code for access after hours if requested. The Contractor will assume responsibility for damage, theft, security, alarms, life safety systems and monitoring service coordination.
- G. Utility Outages and Shutdown:
1. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
 2. Limit shutdown of utility services to minimize down time, arranged at least 24 hours in advance with Owner.
 3. Prevent accidental disruption of utility services to other facilities.

1.06 SPECIFICATION SECTIONS APPLICABLE TO ALL CONTRACTS

- A. Unless otherwise noted, all provisions of the sections listed below apply to all subcontracts. Specific items of work listed under individual contract descriptions constitute exceptions.
- B. Section 01 0000 - General Requirements
- C. Section 01 1000 - Summary of Work
- D. Section 01 1400 - Work Restrictions
- E. Section 01 5000 - Temporary Facilities and Controls.
- F. Section 01 6000 - Product Requirements.
- G. Section 01 7000 - Execution and Closeout Requirements.
- H. Section 01 7800 - Closeout Submittals.

END OF SECTION

**SECTION 01 1400
WORK RESTRICTIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project-specific work restrictions.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, Division 1 Specification Sections and addenda apply to this Section.
- B. Request for Proposal: Additional restrictions for workers.
- C. Section 01 1000 - Summary of Work: Use of premises and occupancy.

1.04 OCCUPANCY REQUIREMENTS

- A. Contractor's employees are not allowed to interact with Buncombe County Schools staff or students other than those designated as construction or emergency contacts.
- B. Profanity, lewd comments, or suggestive behavior will not be tolerated on the job site.
- C. Use of the Owner's toilets by employees of the Contractor and their subcontractors is prohibited.
- D. Use of the Owner's telecommunications systems by employees of the Contractor and their subcontractors is prohibited.
- E. Prohibitions of firearms on school property are governed by state law. Bearers of concealed carry permits may conceal their weapon in their locked vehicle while on campus.
- F. Buncombe County Schools is tobacco free. Smoking and tobacco products are not permitted within the building or on Board of Education property.
- G. The use of radios is prohibited.
- H. Lock automotive type vehicles such as passenger cars and trucks, and other types of mechanized and motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.

END OF SECTION

**SECTION 01 2300
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of alternates.
- B. Procedures for pricing alternates.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary General Conditions, Division 1 Specification Sections and Addenda apply to this Section.

1.03 DEFINITIONS

- A. Definition: An alternate is an amount proposed by bidders and stated on the Form of Proposal for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to the Contract Sum to incorporate the Alternate into the Work. No other adjustments will be made to the Contract Sum.

1.04 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each alternate.
- C. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- D. Notification: Immediately following the award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate whether alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- E. Execute accepted alternates under the same conditions as other Work of this Contract.

1.05 SCHEDULE OF ALTERNATES

Alternate No. 1 - Replacement of Northeast Windows:

Contractors shall provide a separate alternate price to provide and install replacement windows at the northeast windows, as designated on the drawings. The base bid includes no work at these windows.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

Construction Term Abbreviations

# or No.	Number or Pound
&	and
@	at
Ø	Diameter
%	Percent
A.B.	Anchor Bolt
A.F.F.	Above Finish Floor
Alum.	Aluminum
Approx.	Approximate
Bldg	Building
CJ	Control Joint
CL	Centerline
Col.	Column
Cont	Continuous
Dia.	Diameter
Dwg.	Drawing
EJ	Expansion Joint
Elev.	Elevation
EQ	Equal Space
Ex. Or Exist.	Existing
F.V.	Field Verify
Ft	Foot or Feet
Ft²	Square Feet
GC	General Contractor
Ga.	Gauge
H or Ht.	Height
Max.	Maximum
Mfr.	Manufacturer
Min.	Minimum
N/A	Not Applicable
N.I.C.	Not in Contract
Nom.	Nominal
O.C.	On Center
Req'd	Required
SF	Square Feet
SS	Stainless Steel
Sim	Similar
Spec	Specification
Stl	Steel
Struct.	Structural
TYP	Typical
UL	Underwriter's Laboratories
UON	Unless Otherwise Noted
UNO	Unless Noted Otherwise
Vert.	Vertical
W	Width
W/	With

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Temporary utilities. Including, but not limited to:
 - 1. Electric power.
 - 2. Water service.
- B. Temporary construction and support facilities. Including, but not limited to:
 - 1. Sanitary facilities, including drinking water.
 - 2. Controls: Barriers.
 - 3. Storage.
 - 4. Vehicular access and parking.
 - 5. Waste removal facilities and services.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, other Division-1 Specification Sections and addenda apply to this Section.
- B. Section 01 1000 - Summary of Work: Requirements for Owner notification of utility service interruptions.
- C. Section 01 1400 - Work Restrictions requirements and restrictions related to use and occupancy of project site.

1.03 TEMPORARY UTILITIES, GENERAL

- A. The cost of securing the use of the Owner's utilities or other temporary facilities to point of use shall be borne by the Contractor.
- B. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect. Neither the Owner nor Architect will accept cost or use charges as a basis of claims for Change Orders.

1.04 TEMPORARY ELECTRICITY

- A. The Contractor may utilize the owner's electricity so long as its use is not abused.
- B. Permanent convenience receptacles may be utilized during construction.
- C. Walkways shall be kept clear of cords. Extension cords shall be grounding type and without splices.

1.05 TEMPORARY WATER SERVICE

- A. Water Service: The contractor may connect to Owner's existing water source.
 - 1. The contractor may utilize the owner's water so long as such usage is not abused. Abuse of this privilege will result in the cessation of water use and backcharge to the contractor for water spillage. The contractor under those conditions will be responsible for seeking and providing their own construction water.
 - a. Hoses shall be turned off at the end of their use for each activity.

1.06 TEMPORARY SANITARY FACILITIES

- A. The Contractor shall provide the necessary portable sanitary facilities for use by all persons performing work at the site. Provide at time of project mobilization and locate as directed by the owner.
- B. Maintain daily in clean and sanitary condition.

1.07 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1.08 TEMPORARY STRUCTURES

- A. Scaffolding, Runways, Ramps, Ladders, Etc.: The General Contractor shall supply, erect, maintain, and remove upon completion of the work all scaffolding, runways, rams, and ladders required for the common use of all trades. Subcontractors and other Prime Contractors shall supply, erect, maintain, and remove upon completion of their work, all scaffolding required for their particular phase of the work.

1.09 MATERIALS STORAGE

- A. Confine stockpiling of materials and location of storage to areas approved by the Owner.

1.10 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. A limited number of parking spaces will be designated for the contractor's use.

1.11 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.

1.12 CONTRACTOR'S FIELD OFFICE

- A. No field office is required.

1.13 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION - NOT USED****END OF SECTION**

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Submittal procedures.
- E. Substitution limitations and procedures.
- F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, other Division-1 Specification Sections and addenda apply to this Section.
- B. Section 01 7000 - Execution and Closeout Requirements.

1.03 SUBMITTALS, GENERAL

- A. Check submittals carefully against drawings, specifications, field conditions, and adjacent work, and when satisfied that they are correct, mark them accordingly before submitting them to the Architect. Apply Contractor's stamp, signed or initialed certifying that information is in accordance with the requirements of the Work and Contract Documents.
- B. Submittals received by the Architect that do not bear the Contractor's stamp of approval will be immediately returned to the Contractor without review by the Architect. Delay caused by shop drawings being returned because of incomplete or inaccurate information or for lack of Contractor's approval stamp will not be grounds for an extension of time.
- C. Acceptance of material on the basis of shop drawings, samples, brochures, and other materials submitted, shall be understood to be conditional on the acceptability of the actual material incorporated into the building. The inclusion into the work of a material which may at a later date be disclosed to be unsuitable for job conditions or not in conformity with samples, brochures, shop drawings, or materials submitted, shall be at the risk of the Contractor.
- D. Submittals will be accepted in electronic or hard (paper) format. In general, where hard copies of submittals are provided, two sets of shop drawings and product data shall be submitted in addition to those required by the Contractor for his own use:
- E. Project Closeout Submittals: Refer to Section 01 7800.

1.04 PRODUCT DATA

- A. Product Data Submittals: Submit manufacturer's standard published data, instructions certifications and test results, as indicated in the individual specification sections. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project and as required to verify compliance with all specified requirements.
 - 1. Collect Product Data into a single submittal for each element of construction or system.

1.05 SHOP DRAWINGS

- A. Submit newly prepared information, specific to this Project, drawn to accurate scale.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Dimensions.
 - 2. Identification of products and materials included. Where practicable, markings of items shall be so coded that "shop marks" agree with "Architect's Mark".
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- C. Submittal Format:
 - 1. Sheet Size: Except for templates, patterns and similar full- size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 24" x 36".

1.06 SAMPLES

- A. Submit fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Include the following:
 - 1. Product name or name of manufacturer.
 - 2. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.
- B. Samples of materials as required shall be furnished for the Architect's review. These shall remain the Contractor's property and shall be removed by him after they have been reviewed or ceased to be useful.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. No asbestos-containing material may be used on this project.
- C. Provide interchangeable components of the same manufacture for components being replaced.
- D. Motors: Refer to Section 22 0513, NEMA MG 1 Type. Specific motor type is specified in individual specification sections.
- E. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.
- F. Cord and Plug: Provide minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBMITTAL PROCEDURES

- A. Transmit each submittal with a transmittal form identifying the Project, Contractor, product and the associated specification section number. Provide a separate transmittal form for each individual product.
- B. For electronic submittals, provide a single file in pdf format for each product, containing the transmittal followed by the relevant submittal data.
- C. Deliver submittals to Architect at business address.
- D. Schedule submittals to expedite the Project, and coordinate submission of related items. All shop drawing submittals shall be made within 30 days of the Notice to Proceed. Allow 15 days minimum, excluding delivery time to and from the contractor to allow for comparison with of shop drawings with the original contract documents, any change orders which have been issued, or any necessary changes required for proper coordination with other trades.
- E. **Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.**
- F. When revised for resubmission, identify all changes made since previous submission.
- G. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- H. Submittals not requested will not be recognized or processed.

3.02 SUBSTITUTION PROCEDURES

- A. Prior to bidding, requests for substitutions may be submitted for consideration up to seven days prior to the scheduled bid opening.
- B. After contract award, subcontractors and material suppliers shall submit proposed materials for approval only through the Contractor and shall not come directly to the Architect. All approvals will be handled entirely through the Contractor.
- C. Substitutions will be considered when a product becomes unavailable through no fault of the Contractor.
- D. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on the proposer.
- E. Substitution Submittal Procedure:
 - 1. Submit three hard copies or one electronic copy of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Each request must be accompanied by a completed CSI request form.
 - 3. The Architect will notify Contractor in writing of decision to accept or reject request.

3.03 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- D. All materials and equipment delivered to job shall be handled, stored, and maintained in such manner as to thoroughly protect them from damage. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

3.04 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.

- C. Provide suitable storage for all materials subject to damage from exposure. All material shall be placed in orderly piles or stacks and shall not be so placed as to damage trees, shrubs, or other plants. Prevent contact with material that may cause corrosion, discoloration, or staining.
- D. For exterior storage of fabricated products, place on supports above ground.
- E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- F. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- G. Provide bonded off-site storage and protection when site does not permit on-site storage or protection. Off-site storage must be located within the State of North Carolina to permit progress payments for products stored.

END OF SECTION

SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Cutting and patching. Cutting includes removal of existing construction or materials associated with the existing building as necessary to permit installation or performance of other work. Patching includes fitting and repair work required to restore surfaces to original conditions after installation of other work.
- D. Cleaning and protection, including final cleaning.
- E. Starting of systems and equipment.
- F. Demonstration and instruction of Owner personnel.
- G. Closeout procedures, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary General Conditions, other Division-1 Specification Sections and addenda apply to this Section.
- B. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.
- C. Section 02 4100 - Demolition: Demolition of whole structures and parts thereof.

1.03 REFERENCE STANDARDS

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2009.

1.04 PROJECT CONDITIONS

- A. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- B. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time during school operations; excessively noisy includes jackhammers and other demolition tools.
- C. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS**2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. General: Contractor, Subcontractors and material suppliers shall be responsible for inspecting all job conditions affecting the installation of an item and taking all field measurements required prior to fabrication of an item to insure that the item concerned will integrate properly with all adjacent materials and fit all other conditions as they exist or will exist in the finished construction.
- B. Acceptance of Substrates: Each Contractor or Subcontractor is responsible for inspecting the work which precedes his work and reporting any deficiencies which will affect his work to the Architect prior to beginning new work. Commencement of new work over preceding work constitutes this Contractor's or Subcontractor's acceptance of preceding work. The cost of removing new work to make remedial repairs to existing conditions will be borne by the contractor. The Contractor shall immediately bring to the attention of the architect any discrepancy between existing conditions as shown on the drawings and conditions found at the site. Corrections of existing conditions are the responsibility of the Owner and may at the discretion of the Architect be made by others. The cost of corrections to existing conditions made by the Contractor without the prior approval of the Architect shall be borne by the Contractor.
- C. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- D. Examine and verify specific conditions described in individual specification sections.

3.02 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Anchor each product securely in place, accurately located and aligned with other Work.
- D. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- E. Install fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- F. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- G. Make neat transitions between different surfaces, maintaining texture and appearance.

3.03 ALTERATIONS

- A. Drawings showing existing construction are based on casual field observation and existing record documents only.
 - 1. Verify that construction arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Protect existing work to remain.

1. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 2. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

3.04 OPENINGS AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Cutting and patching shall be done by workers skilled in the trade. All affected areas are to be patched with materials similar to adjacent surfaces, and as required to restore surfaces to their original condition. Provide temporary support of Work to be cut.
1. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
- C. Structural Integrity and Performance: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Broom clean interior areas daily during interior demolition and construction operations.
- C. Remove all construction materials, equipment, temporary scaffolding, etc. from inside the building prior to the commencement of each the Owner's scheduled activities.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

- A. General: The Contractor is responsible for the protection of his work until final acceptance of the work and shall take precautions to prevent damage to existing work and the work of subcontractors. It is the responsibility of the Contractor to repair, replace or restore his work to acceptable condition.
- B. Weather: Contractor shall bear full responsibility for damage caused by weather or storm to any part of the complete work and materials included in or forming part of this contract. He shall provide all protection, guards, braces, etc., required and shall make good in an approved manner at this own expense, any and all damage so caused.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Remove protective coverings when no longer needed.

3.07 FINAL CLEANING

- A. Execute final cleaning before requesting inspection of Certification of Final completion.
1. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program in compliance with manufacturer's instructions.
- C. Use cleaning materials that are nonhazardous.
- D. Clean interior and exterior glass. Restore reflective surfaces to their original reflective condition. Remove glazing compound and other substances that are vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

- E. Clean interior and exterior surfaces exposed to view; remove stains and foreign substances, polish transparent and glossy surfaces. Clean exposed exterior and interior hard-surfaced finishes to a dust free condition, free of stains, films and similar foreign substances.
- F. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- G. Clean site of rubbish, litter and other foreign substances; sweep paved areas broom clean, rake clean landscaped surfaces. Remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even textured surface.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury. Contractor shall comply with regulations of authorities having jurisdiction and safety standard for cleaning. Do not discharge volatile, harmful or dangerous materials into drainage systems.

3.08 FINAL INSPECTION PROCEDURES

- A. The contractor shall notify the architect in writing prior to an anticipated Preliminary Final Inspection.
- B. No less than 48 hours prior to a Preliminary Final Inspection, the contractor shall submit to the architect written certification that Contract Documents have been reviewed, work has been inspected, that work is complete in accordance with Contract Documents and that the project is ready for the Architect's review. The contractor shall include with their certification their punch list of work that does not comply with contract requirements, but is being corrected.
- C. The Architect will schedule a Preliminary Final Inspection of the project for the purpose of further developing the list of discrepancies, from the Contractor's punch list. All punch list items shall be corrected within 30 days from the date of the Preliminary Final Inspection.
- D. Notify the Architect when work is considered finally complete, and all discrepancies noted in the punch list have been corrected. Submit a copy of the punch list, with each completed item initialed by the Contractor.
- E. The Architect will verify the completeness of the project and schedule a formal final inspection with the contractor and owner.
- F. Upon satisfaction of all requirements and correction of the punch list, the Architect will confirm in writing, the completion of all final punch list items by the Contractor.

3.09 FINAL ACCEPTANCE

- A. Written approval from the Owner is required for final acceptance.
- B. Builders Risk Insurance: The contractors shall not cancel their builder's risk insurance until final acceptance of the project.
- C. Final Documents: Refer to section 01 7800 Closeout Submittals for document submittal requirements.

END OF SECTION

**SECTION 01 7800
CLOSEOUT SUBMITTALS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Warranties.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary General Conditions, other Division 1 Specification Sections and addenda apply to this Section.
- B. Section 01 7800 Appendix A - List of Warranties.
- C. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Preliminary Documents - Warranties: Where specific warranty requirements are described in the individual specification sections, submit sample warranties for verification purposes when submitting product data.
- B. Documents Due prior to Final Inspection: Applicable items from the following list shall be submitted by the Contractor prior to the scheduling of the Final Inspection with the Owner:
 - 1. Contractor's statement of completion with request for designer's inspection.
- C. Final Documents: Applicable items from the following list shall be submitted by the Contractor with claim for final Application for Payment:
 - 1. Final Application and Certificate for Payment Document (AIA Document G702).
 - 2. Appendix E - MBE Documentation of Contract Payments.
 - 3. List of Subcontractors and Suppliers.
 - 4. Cancellation of Builders Risk Insurance: The contractors shall not cancel their builder's risk insurance until final acceptance of the project. The contractor shall forward cancellation notice to the Designer and the Owner.
 - 5. All remaining warranty documents.
 - 6. Final Certificate and Release.
 - 7. Project record documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. General: During the entire construction period, the General Contractor shall maintain a clean set of drawings for recording as-built conditions where they differ from the layout details shown on the drawings. Monthly payments to Contractors will be withheld in the absence of up to date record drawings.
- B. Maintain on site one complete set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
- C. Ensure entries are complete and accurate, enabling future reference by Owner.
- D. Store record documents separate from documents used for construction.

- E. Record information concurrent with construction progress.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.
- G. Prior to final close-out of the job, submit complete record marked-up prints and specifications to the Architect in good condition.

3.02 WARRANTIES

- A. Verify that documents are in proper form, contain full information, and are notarized. Co-execute submittals when required.
- B. Verify that warranty periods begin at the date of Final Acceptance of the work, or the date of Beneficial Occupancy, as applicable.
- C. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

3.03 CLOSEOUT COPIES

- A. At completion of project, transmit all required final closeout documents and warranties to Architect in a single, complete submittal. Partial submittals of final closeout documents will be rejected.
- B. Submit 1 hard copy of bound sets and 2 electronic copies of sets of all final closeout documents unless otherwise noted.

END OF SECTION

CLOSEOUT SUBMITTALS - APPENDIX A**List of Warranties**

The following is a list of sections containing requirements for warranties pertinent to this project. Refer to the individual specification sections for detailed warranty requirements. Specimen warranties are required with initial product submittals. Warranty terms shall be as noted in the applicable specification section.

Warranties required at close-out include, but are not limited to, the following:

General Conditions of the Contract: General Contractor's 1-year warranty

Section 07 9000 Joint Sealers: Manufacturer's Warranty

Section 08 4313 Metal-Framed Storefront Systems: Manufacturer's Warranty

Section 08 4313 Metal-Framed Storefront Systems: 2-year Installer Warranty

Section 08 8000 Glazing: Manufacturer's Warranty

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, Division 1 Specification Sections and Addenda apply to this Section.
- B. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- C. Section 01 5000 - Temporary Facilities and Controls: Protective barriers and waste removal.
- D. Section 01 7000 - Execution and Closeout Requirements

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2009.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Materials to be destroyed shall be disposed of in strict compliance with applicable local, state and federal law. The General Contractor shall be responsible for all permits, fees, inspections and applications associated with building demolition and the disposal of building materials. Contractors shall comply with governing EPA notification regulations before starting demolition.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required applicable permits.
 - 2. Comply with applicable requirements of NFPA 241.
 - 3. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 4. Provide protective measures as required to provide free and safe passage of Owner's personnel and general public to occupied portions of campus.
 - 5. Conduct operations to minimize effects on and interference with adjacent spaces, structures and occupants. Provide protections necessary to prevent damage to existing improvements indicated to remain in place.
 - 6. Conduct operations to minimize obstruction of entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Protect existing structures and other elements that are not to be removed.
- E. Minimize production of dust due to demolition operations.

3.02 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction are based on casual field observation and existing record documents only.
 - 1. Verify that construction arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 2. Patch as specified for patching new work.
- E. Protect existing work to remain.
 - 1. Repair adjacent construction and finishes damaged during removal work.
 - 2. Patch as specified for patching new work.

3.03 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris.

END OF SECTION

SECTION 07 9000
JOINT SEALERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sealants and joint backing.
- B. Precompressed foam sealers.
- C. Hollow gaskets.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions and Division 1 Specification Sections, and Addenda, apply to this Section.
- B. Section 01 7800 - Closeout Submittals.
- C. Section 08 8000 - Glazing: Glazing sealants and accessories.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with other sections referencing this section.

1.04 SUBMITTALS

- B. See Section 01 6000 - Product Requirements, for submittal and substitution procedures.
- A. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

1.05 QUALITY ASSURANCE

- A. Single Source Responsibility for Joint Sealant Materials: Obtain joint sealant materials from a single manufacturer for each different product required.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after date of Final Acceptance of the work or Beneficial Occupancy.
- C. Warranty: Include coverage for installed sealants and accessories which fail to achieve airtight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 SEALANTS

- A. Compatibility: Provide joint sealants, joint fillers, 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: Provide color of exposed joint sealants as selected by the Architect from manufacturer's full range of standard colors for products of type indicated.

2.02 SEALANTS FOR EXTERIOR USE

- A. Type ES1 - Polyurethane Sealant: ASTM C 920 Type S, Grade NS, Class 25. Uses NT, M, [A](#), [O](#). [Single](#) component, moisture curing, non-sag, non-staining, non bleeding, capable of continuous water immersion.
 - 1. Color: Match adjacent finished surfaces.
 - 2. Movement Capability: Plus and minus 25 percent.
 - 3. Service Temperature Range: -20 to 180 degrees F.

4. Shore A Hardness Range: 20 to 35.
 5. Applications: Use for:
 - a. Exterior and interior joints between concrete or masonry and other materials.
 - b. Other exterior joints for which no other sealant is indicated.
 6. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to:
 - c. Dynatrol I-XL, Pecora Corporation.
 - d. MasterSeal NP1, Master Builders Solutions, BASF.
 - e. Dymonic, Tremco.
- B. Type ES2 - Polyurethane Sealant: ASTM C 920 Type M, Grade NS, Class 50. Uses T, NT, M, A, O. Multiple component, chemical curing, non-sag, non-staining, non-bleeding, capable of continuous water immersion.
1. Color: Match adjacent finished surfaces.
 2. Movement Capability: Plus and minus 25 percent.
 3. Service Temperature Range: -20 to 180 degrees F.
 4. Shore A Hardness Range: 20 to 35.
 5. Applications: Use for:
 - a. Exterior and interior joints between concrete or masonry and other materials.
 - b. Other exterior joints for which no other sealant is indicated.
 6. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to:
 - a. Dynatrol II, Pecora Corporation.
 - b. SikaFlex 2C NS, Sika
 - c. Dymeric, Tremco.
- C. Type ES5 - Silicone Sealant: ASTM C 920 Type S, Grade NS, Class 50, Uses NT, A, G, M, O; single component, neutral curing, non-sagging, non-staining, non-bleeding.
1. Movement Capability: Plus and minus 50 percent.
 2. Service Temperature Range: -60 to 180 degrees F.
 3. Shore A Hardness Range: 15 to 35.
 4. Applications: Use for:
 - a. Exposed joints within aluminum entrance framing systems, interior and exterior.
 5. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to:
 - a. 999-A, Dow Corning
 - b. Contractors 1000, GE
 - c. 864NST, Pecora Corp.
 - d. Spectrem 3, Tremco.

2.03 SEALANTS FOR INTERIOR USE

- A. Type IS2 - Acrylic Emulsion Latex Sealant: ASTM C 834, Type OP, Grade NF. Single component, paintable.
1. Color: Match adjacent finished surfaces.
 2. Applications: Use for:
 - a. Interior joints in gypsum drywall, plaster, concrete and masonry.
 - b. Interior joints between door and window frames and wall surfaces.
 - c. Other interior joints for which no other type of sealant is indicated.
 3. Available Products: Subject to compliance with requirements, elastomeric sealants that may be incorporated in the Work include, but are not limited to:
 - a. AC-20, Pecora Corp.
 - b. Siliconized Acrylic Construction Grade (35 Year) Sealant, Red Devil.
 - c. Tremflex 834, Tremco, Inc.

2.04 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 EXECUTION**3.01 EXAMINATION**

- A. Verify that substrate surfaces and joint openings are ready to receive work.

3.02 PREPARATION

- A. Clean and prime joints in accordance with manufacturer's instructions.
- B. Protect elements surrounding the work of this section from damage or disfigurement.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C 1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.
- D. Install bond breaker where joint backing is not used.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- G. Tool joints [concave](#).
- H. Compression Gaskets: Avoid joints except at ends, corners, and intersections; seal all joints with adhesive; install with face 1/8 to 1/4 inch below adjoining surface.

3.04 CLEANING

- A. Clean adjacent soiled surfaces.

3.05 PROTECTION

- A. Protect sealants until cured.

END OF SECTION

SECTION 08 4313
ALUMINUM-FRAMED STOREFRONT SYSTEMS

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Aluminum-framed storefront, with vision glass.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, Division 1 Specification Sections, and Addenda, apply to this Section.
- B. Section 01 7800 - Closeout Submittals.
- C. Section 07 9000 - Joint Sealers: Perimeter sealant and back-up materials.
- D. Section 08 8000 - Glazing: Glass and glazing accessories.

1.03 SUBMITTALS

- A. See Section 01 6000 - Product Requirements, for submittal and substitution procedures.
- B. Qualification Data: Indicating compliance with Quality Assurance Article.
- C. Product Data: Provide component dimensions, describe components within assembly, anchorage and fasteners, glass, internal drainage details.
- D. Specimen Warranty.
- E. Shop Drawings: Include plans, elevations, sections, details, hardware and installation details. Indicate system dimensions, framed opening requirements and tolerances, operational clearances, attachments to adjacent Work, affected related Work, expansion and contraction joint location and details, and field welding required.
 - 1. Include structural analysis data signed and sealed by the qualified North Carolina professional engineer who was responsible for its preparation.
- F. Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.
- G. Design Data: Provide framing member structural and physical characteristics, engineering calculations, dimensional limitations.
- H. Samples for Initial Color Selection: Submit color chips representing manufacturer's full range of available colors and patterns on actual substrate materials.
- I. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.04 QUALITY ASSURANCE

- A. Designer Qualifications: Design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed at the State in which the Project is located.
- B. Manufacturer Qualifications: Company specializing in manufacturing aluminum glazing systems with minimum three years of documented experience.
- C. Installer Qualifications: Company with successful record of in-service performance with installation of similar units on projects of similar size and scope.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Handle products of this section in accordance with AAMA CW-10.
- B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.06 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Manufacturer's Warranty: Submit written warranty, signed by the storefront systems manufacturer, agreeing to replace units that fail in materials or workmanship within the specified warranty period. Warranty period commences on date of Final Acceptance of the work or Beneficial Occupancy.
 - 1. Warranty Period: 2 years.
- C. Finish Warranty: Provide 20 year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.
- D. Glass Warranty: See Section 08 8000.

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Aluminum storefront, subject to compliance with requirements, manufacturers include but are not limited to:
 - 1. Efco Corp.
 - 2. YKK AP America Inc.
 - 3. Kawneer North America.
 - 4. United States Aluminum Corp, C.R. Laurence Co.
 - 5. Oldcastle Building Envelope.
 - 6. Tubelite, Inc.
 - 7. Vitro Architectural Products.

2.02 STOREFRONT SYSTEMS

- A. Exterior Aluminum-Framed Storefront: Factory fabricated, factory finished **thermally broken** aluminum framing members, and related flashings, anchorage and attachment devices.
 - 1. Frame Construction: **Screw spline or shear block at Contractor's option.**
 - 2. Glazing Type: **Insulating Glass.**
 - 3. Glazing Position: **Front set.**
 - 4. Frame Dimensions: Nominal 2 inches maximum by 4-1/2 inches.
 - 5. Mullion Dimensions: Nominal 2 inches, match existing frame depth.

2.03 PERFORMANCE REQUIREMENTS

- A. General: Provide glazed aluminum storefront system engineered, fabricated, and installed to withstand the effects of the following performance requirements without failure, as demonstrated by testing manufacturer's corresponding stock systems according to test methods indicated.
 - 1. Receptor frames, mullions and associated framing components shall be designed to meet the same performance criteria as the primary storefront unit.
 - 2. Design Wind Loads: Determine design wind loads applicable to the Project from basic wind speed indicated, according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures," Chapter 6, based on mean roof heights above grade indicated on the drawings.
 - a. Basic Wind Speed: 90 mph.
 - b. Importance Factor: 1.0.
 - c. Exposure Category: C.
- B. Wind Load, Exterior Storefront Assemblies: Provide glazed aluminum storefront system, including anchorage, capable of withstanding wind-load design pressures calculated to meet

- requirements of authorities having jurisdiction or the American Society of Civil Engineers' ASCE 7, "Minimum Design Loads for Buildings and Other Structures," Chapter 6, but not less than 10 lb/sq. ft. acting in either direction normal to the surface.
- C. Uniform Load: To be determined in accordance with ASTM E1300. Provide glazed aluminum storefront system that does not evidence material failures, structural distress, or permanent deformation of main framing members exceeding specified values when tested according to ASTM E 330.
1. Design Load: 20 psf in positive and negative directions.
 2. Deflection of framing members in a direction normal to wall plane is limited to 1/175 of clear span or 3/4 inches (19 mm), whichever is smaller, unless otherwise indicated.
 3. Deflection of framing members shall not reduce glazing bite below 75 percent of design dimension when carrying full dead load. Provide a minimum 1/8-inch (3.18-mm) clearance between members and top of fixed panels, glazing, or other fixed part immediately below.
 4. Test Performance: No permanent deformation of main framing members exceeding 0.2 percent of clear span at structural test load of 150 percent of inward and outward wind-load design pressures.
 - a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
 5. Duration: As required by design wind velocity; fastest 1 mile (1.609 km) of wind for relevant exposure category.
- D. Seismic Loads: Provide glazed aluminum storefront system, including anchorage, capable of withstanding the effects of earthquake motions calculated according to requirements of authorities having jurisdiction or ASCE 7, "Minimum Design Loads for Buildings and Other Structures," Section 13.5.9, whichever are more stringent.
- E. Air Infiltration, Exterior Systems: Air infiltration rate shall not exceed 0.06 cfm/sq. ft. of fixed wall area when tested according to ASTM E 283 at a static-air-pressure difference of 6.24 lbf/sq. ft.
- F. Water Penetration, Exterior Systems: No water leakage when tested according to ASTM E 331 at minimum differential pressure of 20 percent of inward acting wind-load design pressure as defined by ASCE 7, "Minimum Design Loads for Buildings and Other Structures," but not less than 8 lbf/sq. ft. according to AAMA 501.
- G. Condensation Resistance: Not less than 55 when tested according to AAMA 1503.1 with 1-inch insulating glass units.
- H. Average Thermal Conductance, exterior systems: U-value of not more than 0.45 fixed panels when tested according to AAMA 1503.1.
- I. Average Solar Heat Gain Coefficient, exterior systems: SHGC 0.33 maximum.
- J. Thermal Movements: Provide glazed aluminum storefront system, including anchorage, that accommodates thermal movements of system and supporting elements resulting from the maximum change (range) of 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces, in ambient and surface temperatures over a 12 hour period, without buckling, damaging stresses on glazing, failure of joint sealants, damaging loads on fasteners, noise or vibration, and other detrimental effects.
- K. Structural Support Movement: Provide glazed aluminum storefront system that accommodates structural movements including, but not limited to, sway, twist, column shortening, long-term creep, and deflection.
- L. Dimensional Tolerances: Provide glazed aluminum storefront system, including anchorage that accommodates dimensional tolerances of building frame and other adjacent construction.
- M. Movement: Accommodate movement between storefront and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.

2.04 MATERIALS

- A. Extruded Aluminum: ASTM B 221, alloy 6063-T5, not less than 0.08 inches wall thickness at any location in primary frame.
- B. Sheet Aluminum: ASTM B 209 (ASTM B209M).
- C. Structural Steel Sections: ASTM A 36/A 36M; galvanized in accordance with requirements of ASTM A 123/A 123M.
- D. Anchors, Clips: Aluminum, nonmagnetic stainless steel or zinc-coated steel or iron complying with ASTM B633 for SC3 severe service conditions. Provide sufficient strength to withstand design pressure indicated.
 - 1. Exposed Fasteners: [Stainless steel](#), permitted where concealed fasteners are not technically feasible.
- E. Reinforcing Members: Aluminum, nonmagnetic stainless steel or nickel/chrome plated steel complying with ASTM B456 for Type SC3 severe service conditions, or zinc-coated steel or iron complying with ASTM B633 for SC3 severe service conditions. Provide sufficient strength to withstand design pressure indicated.
- F. Exposed Flashings: [0.032 inch](#) thick aluminum sheet; finish to match framing members.
- G. Concealed Flashings: [0.018 inch](#) thick aluminum.

2.05 COMPONENTS

- A. Aluminum Framing Members: Tubular aluminum sections, drainage holes and internal weep drainage system. Sizes as noted on the drawings.
 - 1. Framing members for exterior applications shall be [thermally broken with interior section insulated from exterior](#).
 - 2. Structurally Reinforced Members: Provide internal reinforcement of structural steel member as required for design loading.
- B. Receptor Head and Jamb Frames: Same construction as frame components. Provide sealed end dams at head receptors.
- C. Receptor Sill Frames (Sill Flashing Clip): Same construction as frame components, sloped to direct water to exterior through weep holes.
 - 1. Provide continuous one-piece sill frame [at all new exterior storefront assemblies](#).
 - 2. Provide end dams as required for complete, watertight internal drainage system.
- D. Thermal Break: Mechanically and adhesively joined to aluminum storefront components, designed in accordance with AAMA TIR-A8 and tested in accordance with AAMA 505.
- E. Glazing: As specified in Section 08 8000.
- F. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.
- G. Glazing Accessories: As specified in Section 08 8000.
- H. Structural Sealant: ASTM C1184, single component neutral curing silicone formulation, compatible with structural sealant and other system components with which it comes into contact. Specifically formulated and tested for use as a structural sealant and approved by structural sealant manufacturer for use in aluminum framed systems indicated.
 - 1. Design of structural sealant glazed system shall comply with ASTM C1401 "Guide for Structural Sealant Glazing."
 - 2. Color: Black.
- I. Bond-Breaker Tape: As specified in Section 07 9000.

2.06 FABRICATION

- A. Fabricate components in sizes and configurations indicated, with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal. Provide a complete system for assembling components.

- B. Dimensional Tolerances: Provide glazed aluminum storefront system, including anchorage that accommodates dimensional tolerances of building frame and other adjacent construction.
- C. Accurately fit and secure joints and corners. Make joints flush, hairline, and [weatherproof](#). Maintain accurate relation of planes and angles.
- D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
- E. Reinforce framing members for imposed loads and scheduled hardware.
- F. Prepare components to receive anchor devices. Fabricate anchors.
- G. Exterior System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
- H. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.
- I. Arrange fasteners and attachments to conceal from view.
- J. Finishing: Apply factory finish to all surfaces that will be exposed in completed assemblies.
 - 1. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - 2. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

2.07 FINISHES

- A. Class I Color Anodized Finish: AAMA 611 AA-M12C22A44 Electrolytically deposited colored anodic coating not less than 0.7 mils thick.
- B. Color: [Match existing exterior storefront](#).
- C. Touch-Up Materials: As recommended by coating manufacturer for field application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify dimensions, tolerances, and method of attachment with other work.

3.02 INSTALLATION

- A. General: Install aluminum storefront system in accordance with manufacturer's instructions.
- B. Install receptor frames and sill flashing clips in accordance with manufacturer's instructions. Verify that end dams at head and sill flashing clips are in place, and that receptor frame is weathertight. Seal end dams to jamb receptors.
- C. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.
- D. Provide alignment attachments and shims to permanently fasten system to building structure, in proper relation to adjacent construction.
- E. Align assembly plumb, level, square, true to line free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.
- F. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
- G. Install storefront system and components to drain condensation and water penetrating joints to the exterior.
- H. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

- A. Install glass panels in accordance with Section 08 8000, using glazing method required to achieve performance criteria. Glazing shall be physically and thermally isolated from framing members.
 - 1. Structural Sealant Installation: Comply with ASTM C1401 "Guide for Structural Sealant Glazing."
- B. Maintain continuous air barrier and vapor retarder throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
- C. Install perimeter sealant in accordance with Section 07 9000.
- D. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 TOLERANCES

- A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 ft, whichever is less.
- B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.04 CLEANING

- A. Remove protective material from pre-finished aluminum surfaces.
- B. Remove non-permanent labels.
- C. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- D. Remove excess sealants and glazing materials by method acceptable to sealant manufacturer.
- E. Remove and replace glass that has been broken, chipped, cracked, abraded or damaged during construction.

END OF SECTION

SECTION 08 8000
GLAZING

PART 1 GENERAL**1.01 SECTION INCLUDES**

- A. Glass in aluminum storefront frames.

1.02 RELATED REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary General Conditions, Division 1 Specification Sections, and Addenda, apply to this Section.
- B. Section 01 7800 - Closeout Submittals.
- C. Section 08 4313 - Aluminum-Framed Storefronts.

1.03 SYSTEM PERFORMANCE REQUIREMENTS

- A. General: Provide glazing systems that are produced, fabricated, and installed to withstand normal thermal movement and impact loading (where applicable), without failure including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; and other defects in construction.
- B. Glass Design: Glass thicknesses indicated on Drawings are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions.
 - 1. Glazing for Aluminum Storefronts: Coordinate with performance requirements specified in Section 08 4313.

1.04 SUBMITTALS

- A. See Section 01 6000 - Product Requirements, for submittal and substitution procedures.
- B. Qualification Data: Indicating compliance with Quality Assurance Article.
- C. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- D. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.
- E. Specimen Warranty.
- F. Samples: Submit one sample 4 x 4 inch in size of tinted and insulated glass units, showing coloration and design.
- G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual and FGMA Sealant Manual for glazing installation methods, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
- B. Insulating Glass Certification Program: Provide insulating glass units permanently marked either on spacers or at least one component lite of units with appropriate certification label of inspecting and testing agency indicated below:
 - 1. Insulating Glass Certification Council (IGCC).
- C. Installer Qualifications: Company specializing in performing the work of this section Engage an experienced glazier who has completed glazing similar in material, design, and extent to that indicated for Project with a record of successful in-service performance.
- D. Single-Source Responsibility for Glass: Obtain primary glass of each (ASTM C 1036) type and class indicated from one source for each product.

- E. Single-Source Responsibility for Glazing Accessories: Obtain glazing accessories from one source for each product and installation method indicated.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials to comply with manufacturer's directions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

1.07 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Warranty period commences on date of Final Acceptance of the work or Beneficial Occupancy.
- C. Manufacturer's Warranty on Coated Glass Products: Submit written warranty signed by coated glass manufacturer agreeing to furnish replacements for those coated glass units that deteriorate, f.o.b. point of manufacture, freight allowed Project site, within 10 years after project acceptance. Warranty covers only deterioration due to normal conditions of use and not to handling, installing, and cleaning practices contrary to glass manufacturer's published instructions.
- D. Sealed Insulating Glass Units: Provide a ten (10) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.

PART 2 PRODUCTS

2.01 GLASS MATERIALS

- A. Safety Glazing: Uncoated, clear, heat-treated float glass.
 1. Heat-Strengthened and Fully Tempered Types: ASTM C 1048, Condition A (uncoated surface), Type I (transparent glass, flat), Quality q3 (glazing select).
 2. Type: Class 1 (clear) unless otherwise noted.
 3. Type: Class 2 (tinted) where noted.
 4. Impact Resistance: Compliant with CPSC 16-CFR, Part 1201.
 - a. Comply with Category I for lights of 9 square feet and less.
 - b. Comply with Category II for lights of over 9 square feet.
 5. Impact Resistance, Alternate Compliance: In lieu of 16-CFR, Part 1201 compliance, comply with ANSI Z97.1.
 - a. Comply with Category A.
 6. Thicknesses: For exterior glazing comply with specified requirements for wind load design, but no less than 6 mm thickness for each lite.
 7. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
 - a. AGC Flat Glass North America, Inc.
 - b. Guardian Industries Corp.
 - c. Pilkington North America Inc.
 - d. Saint-Gobain North America.
 - e. Vitro Architectural Glass.

2.02 EXTERIOR GLAZING ASSEMBLIES

- A. Structural Design Criteria: Where performance classification and grade are not indicated, select type and thickness to withstand dead loads and wind loads acting normal to plane of glass at design pressures calculated in accordance with current North Carolina Building Code.

1. Design Wind Loads: Determine design wind loads from basic wind speed at 33 feet above grade, according to ASCE 7, Section 6.5, based on mean roof heights above grade indicated on drawings.
 - a. Basic Wind Speed: 90 miles per hour.
 - b. Importance Factor: 1.0.
 - c. Occupancy Category: III.
 - d. Exposure Category: C.
 2. Use the procedure specified in ASTM E 1300 to determine glass type and thickness.
 3. Deflection: Limit glass deflection to 1/200 or flexure limit of glass, whichever is less, with full recovery of glazing materials.
- B. Air and Vapor Seals: Provide completed assemblies that maintain continuity of building enclosure vapor retarder and air barrier:
1. To maintain a continuous air barrier and vapor retarder throughout the glazed assembly from glass pane to heel bead of glazing sealant.

2.03 SEALED INSULATING GLASS UNITS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
1. Any of the manufacturers specified for float glass.
- B. General: Provide preassembled permanently sealed insulating glass units complying with ASTM E2190.
1. Edge Spacers: Warm edge spacer, steel with bent and spot welded corners.
 2. Edge Seal: Glass to elastomer with supplementary silicone sealant.
- C. Low-E Insulating Glass: Low-E vision glazing units.
1. Basis of Design: Solarban 90 (2) + Clear.
 2. Between-lite space filled with dry hermetic air.
 3. Total Visible Light Transmittance: 26 percent minimum.
 4. Outdoor Visible Reflectance: 10 percent maximum.
 5. Thermal Resistance (U-Value): Maximum 0.29 winter and summer, nominal, center of glass.
 6. Total Solar Heat Gain Coefficient: Maximum 0.20, nominal, center of glass.
 7. Outboard Lite: Fully tempered float glass, 6 mm thick, minimum.
 - a. Tint: Match existing grey.
 - b. Coating: Low-E type, on #2 surface.
 8. Inboard Lite: Fully tempered float glass, 6 mm thick, minimum.
 - a. Tint: Clear.
 9. Total Thickness: 1 inch nominal.

2.04 GLAZING COMPOUNDS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
1. Bostik Inc.
 2. Momentive Performance Materials, Inc (formerly GE Silicones).
 3. Pecora Corporation.
 4. BASF Construction Chemicals-Building Systems.
- B. General: Provide products of type indicated, complying with the following requirements:
1. Compatibility: Select glazing sealants and tapes of proven compatibility with other materials they will contact under conditions of installation and service, as demonstrated by testing and field experience.
 2. Suitability: Comply with sealant and glass manufacturer's recommendations for selecting glazing sealants and tapes that are suitable for applications indicated and conditions existing at time of installation.
- C. Elastomeric Glazing Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that comply with ASTM C 920 requirements.

2.05 GLAZING ACCESSORIES

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials involved for glazing application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers and Sealers: Type recommended by sealant or gasket manufacturer.
- C. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side-walking).
- D. Plastic Foam Joint Fillers: Preformed, compressible, resilient, nonstaining, nonextruding, non-outgassing, strips of closed-cell plastic foam of density, size, and shape to control sealant depth and otherwise contribute to produce optimum sealant performance.
- E. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C 864 Option I. Length of 0.1 inch for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area. Compatible with edge seal of insulating glass units. Notched, to allow water in glazing pocket to drain to weeps.
- F. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face.
- G. Glazing Tape: Preformed butyl-based elastomeric compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; nonstaining and nonmigrating in contact with nonporous surfaces, packaged on release paper backing; black color. Comply with AAMA 800.
 - 1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
 - a. Pecora Corporation.
 - b. Schnee Morehead.
 - c. Tremco Global Sealants.
- H. Glazing Tape: Closed cell polyvinyl chloride foam, coiled on release paper over adhesive on two sides, maximum water absorption by volume of 2 percent, designed for compression of 25 percent to effect an air barrier and vapor retarder seal. Comply with AAMA 810.1.
 - 1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:
 - a. Adhesives Research, Inc.
 - b. Capital Tape Co.
 - c. Norton Foam.
- I. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I.
 - 1. **Color:** As selected from manufacturer's standards.
- J. Glazing Clips: Manufacturer's standard type.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

- C. Prime surfaces scheduled to receive sealant.
- D. Install sealants in accordance with ASTM C 1193 and FGMA Sealant Manual.
- E. Install sealant in accordance with manufacturer's instructions.

3.03 GLAZING, GENERAL

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications.
- B. Glazing channel dimensions as indicated on Drawings provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
- C. Protect glass from edge damage during handling and installation as follows:
 - 1. Use a rolling block in rotating glass units to prevent damage to glass corners. Do not impact glass with metal framing. Use suction cups to shift glass units within openings; do not raise or drift glass with a pry bar. Rotate glass lites with flares or bevels on bottom horizontal edges so edges are located at top of opening, unless otherwise indicated by manufacturer's label.
 - 2. Remove damaged glass from Project site and legally dispose of off site. Damaged glass is glass with edge damage or other imperfections that, when installed, weaken glass and impair performance and appearance.
- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
- E. Install elastomeric setting blocks in sill rabbets, sized and located to comply with referenced glazing standard, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass sizes larger than 50 united inches (length plus height) as follows:
 - 1. Locate spacers inside, outside, and directly opposite each other. Install correct size and spacing to preserve required face clearances, except where gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and comply with system performance requirements.
 - 2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- H. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.
- I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

3.04 PROTECTION AND CLEANING

- A. Protect exterior glass from breakage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.
- B. Remove glazing materials from finish surfaces
- C. Protect glass from contact with contaminating substances resulting from construction operations including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.
- D. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for build-up of dirt, scum, alkali deposits, or stains, and remove as recommended by glass manufacturer.

- E. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.
- F. Wash glass on both faces in each area of Project not more than 4 days prior to date scheduled for inspections that establish date of Final Acceptance. Wash glass as recommended by glass manufacturer.

END OF SECTION