



Planning

Architecture

Interior design

Graphic Design

Project Management

ADDENDUM to CONTRACT DOCUMENTS

Date: February 8, 2018

To: All Bidders

From: Dave Dalby, BSA+A

Copies: All Bidders
Tim Kain, NCCVTSD
Al Schrum, NCCVTD
Kathy Knotts, BSA+A

Project Name: Marshallton Educational Center
Window Replacement

Project Number: 17.019

Subject: **ADDENDUM 1**

NOTICE:

Attention is called to the following item(s), effective as of the date above, which shall be added to, deleted from, or changed in the contract documents dated **February 13, 2018** and any previously issued addenda, thereby incorporating these items into the contract documents.

Attach this Addendum to the project manual for this project. Work or materials not specifically mentioned herein are to be as described in the main body of the specifications and as shown on the drawings. Bidders shall acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the bidder to disqualification.

The following clarification, changes and/or additions shall by this reference be incorporated into the contract documents as though fully set forth therein.

Buck Simpers Architect
+ Associates, Inc.
954 Justison Street
Wilmington, DE 19801
302.658.9300
fax 658.1125
www.simpers.com

A. GENERAL

Item No.	Item
A-1	Attendance at mandatory prebid. Sign in list attached
A-2	Questions must be submitted by email to kknotts@simpers.com no later than noon Thursday February 15, 2018

B. BIDDER QUESTIONS & CLARIFICATIONS

Item No.	Question/Answer:
B-1	W1, W5, W5.1, W7 & W19 call for "AC Panel." Is this panel to be an insulated clad/wood flat panel to match the exterior and interior finish of the window unit? RESPONSE: YES
B-2	Door elevations D1 & D2 Are these to be glass doors with a horizontal lock rail, or 2 panel doors. If 2 panel, will the panels be raised or flat? RESPONSE: INSULATING GLASS WITH HORIZONTAL LOCK RAIL
B-3	W5, W7, W12, W16 & W17 indicate a "Custom Panel" in transom locations. Is this panel to be an insulated clad/wood flat panel to match the exterior and interior finish of the window unit? RESPONSE: YES
B-4	Please provide window head, jamb and sill details. If trim is to be provided at perimeter of windows, please incorporate this into these details. RESPONSE: TO BE ISSUED IN LATER ADDENDUM
B-5	Are the doors to match window spec? Pine, with same interior and exterior finish? RESPONSE: YES
B-6	Existing window type W2 indicates and overall height of 14'-3". The new window M.O. shows 12'-8". Will this existing opening be modified to accept the new window? RESPONSE: THE ORIGINAL DIMENSION FOR EXISTING W2 WAS INCORRECT. M.O. AND NEW WINDOW IS 12'8"
B-7	Are doors D1 & D2 to be 2-1/4" thickness? RESPONSE: DOORS TO BE 1-3/4" THICK (BASIS OF DESIGN MARVIN CCD OR EQUAL)

C. MODIFICATIONS TO DRAWINGS

Item No.	Description:
C-1	
C-2	
C-3	
C-4	

D. MODIFICATIONS TO SPECIFICATIONS

Item No.	Description:
D-1	BID FORM: MODIFY AS NOTED Add line items for Alternates 2 and 3 See Specification section 01 23 00 Alternates for description
D-2	01 23 00 ALTERNATES: Modify as noted and attached Add Alternate #2 SELECTION OF WINDOW Add Alternate #3 WINDOW AIR CONDITIONER
D-3	Add section 079200 JOINT SEALANTS
D-4	Add section 099123 INTERIOR PAINTING

E. ATTACHMENTS

Items	Date
Sign in Sheet	02/08/18
Bid Form	
Specification Section 10 23 00 ALTERNATES	FEB. 2018
Specification Section 079200 JOINT SEALANTS	FEB. 2018
Specification Section 099123 INTERIOR PAINTING	FEB. 2018

END OF ADDENDUM 1

Marshallton Education Building Window Replacement
1703 School Lane, Wilmington, DE 19804
NCC18001

BID FORM

For Bids Due: TBD p

To: New Castle County Vocational Technical School District

Four horizontal lines for address details.

Name of Bidder:

Delaware Business License No.: Taxpayer ID No.:
(A copy of Bidder's Delaware Business License must be attached to this form.)

(Other License Nos.):

Phone No.: () - Fax No.: () -

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

\$ ()

ALTERNATES:

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates.

ALTERNATE No. 1 -EXTERIOR COLOR

AMOUNT WRITTEN IN WORDS: Add / Deduct (\$)

ALTERNATE No. 2 -WINDOW SELECTION

AMOUNT WRITTEN IN WORDS: Add / Deduct (\$)

ALTERNATE No. 3 -WINDOW AIR CONDITIONER

AMOUNT WRITTEN IN WORDS: Add / Deduct (\$)

Marshallton Education Building Window Replacement
1703 School Lane, Wilmington, DE 19804
NCC18001

BID FORM

ALLOWANCES:

ALLOWANCE No. 1: PROVIDE AN ALLOWANCE OF \$250,000.00 FOR UNFORSEEN CONDITIONS DISCOVERED DURING REMOVAL OF EXISTING OR INSTALLATION OF NEW WINDOWS

AMOUNT WRITTEN IN WORDS: Two Hundered Fifty Thousand Dollars
Add (\$ 250,000.00)

Marshallton Education Building Window Replacement
1703 School Lane, Wilmington, DE 19804
NCC18001

BID FORM

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for thirty (30) days from the date of opening of bids (60 days for School Districts and Department of Education), and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid.

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to maintain phased completion dates identified in the construction documents.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

(State of Corporation)

Business Address: _____

Witness: _____ By: _____
(SEAL) (Authorized Signature)

(Title)

Date: _____

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Bond
- Consent of Surety
- (Others as Required by Project Manuals)

Marshallton Education Building Window Replacement
1703 School Lane, Wilmington, DE 19804
NCC18001

BID FORM

SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.

Table with 3 columns: Subcontractor Category, Subcontractor Subcontractors tax payer ID or Delaware Business license #, Address (City & State). Rows include Painter, Window Installer, Carpentry, Demolition Constractor, Caulking, and empty rows 6-9.

Marshallton Education Building Window Replacement
1703 School Lane, Wilmington, DE 19804
NCC18001

BID FORM

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date **New Castle County Vocational Technical School District (NCCVTSD)**.

All the terms and conditions of Contract # 2015-4 have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

E-MAIL: _____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20____.

My Commission expires _____ . NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

SECTION 01 23 00 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Exterior Finish
1. Base Bid: Provide BASIS OF DESIGN MARVIN "Liberty Bronze" or equivalent color by submitted manufacturer
 2. Alternate: Provide BASIS OF DESIGN MARVIN "Bahama Brown" or equivalent color by submitted manufacturer
- B. *Alternate No. 2: Window Selection*
1. *Base Bid: Furnish and install basis of design window, or any approved manufacturer meeting the basis of design window selection design intent, and color with all installation accessories, including ability to accommodate window air conditioner specified.*
 - a. *Submit full range of exterior color selections with bid*
 2. *Alternate: Provide basis of design window*
- C. *Alternate No. 3: Window Air Conditioner*
1. *Base bid: Provide window prepared for specified window air conditioner*
 2. *Alternate: Furnish and install Window Air Conditioner in new window panel. This is a plug model. To plug into existing electric service and outlets*
 - a. *PERFECT AIR 4PAC25000 48 units*
 - b. *PERFECT AIR 4PAC15000 12 UNITS*

END OF SECTION 01 23 00

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Silicone joint sealants.
 - 2. Latex joint sealants.
- B. Related Sections:
 - 1. Section 085200 "WOOD WINDOWS".

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
 - 1. "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- B. Samples for Initial Selection: Manufacturer's color charts (photo copy not permitted) consisting of strips of cured sealants showing the full range of colors available for each product exposed to view. Architect to select max 5 for sample
- C. Samples for Verification (for each of 5 initial selection): For each kind and color of joint sealant required, provide Samples with joint sealants applied in the field

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified **Installer**.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- C. Sealant, Waterproofing, and Restoration Institute (SWRI) Validation Certificate: For each sealant specified to be validated by SWRI's Sealant Validation Program.
- D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- E. Warranties: Sample of special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer[**or are below 40 deg F (5 deg C)**].
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.7 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: **Two** years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: 20 years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 - 1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 - 2. Disintegration of joint substrates from natural causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Architectural Sealants: 250 g/L.
 - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
 - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Low-Emitting Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Colors of Exposed Joint Sealants: **As selected by Architect from manufacturer's full range.**

2.2 SILICONE JOINT SEALANTS

- A. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.
 - 1. **Products:** Subject to compliance with requirements, **available products that may be incorporated into the Work include, but are not limited to, the following**:
 - a. [Pecora Corporation](#); 890NST].
 - b. [Tremco Incorporated](#); Spectrem 1.

2.3 LATEX JOINT SEALANTS

- A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
 - 1. **Products:** Subject to compliance with requirements, **[provide the following] [provide one of the following] [available products that may be incorporated into the Work include, but are not limited to, the following]**:
 - a. [Pecora Corporation](#); AC-20+.
 - b. [Tremco Incorporated](#); Tremflex 834.

2.4 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, [**Type C (closed-cell material with a surface skin)**] [**Type O (open-cell material)**] [**Type B (bicellular material with a surface skin)**] [**or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated**], and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and

Issued by Addendum #1

- approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 3. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
 - C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 1. Do not leave gaps between ends of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
 4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 FIELD QUALITY CONTROL

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Window and door perimeter.
1. Silicone Joint Sealant: **Single component, nonsag, neutral curing, Class 100/50.**
 2. Joint-Sealant Color: **As selected by Architect from manufacturer's full range of colors.**
- B. Joint-Sealant Application: Window and door perimeter and sills.
1. Joint Sealant: **Latex.**

END OF SECTION 079200

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on **interior substrates**
 - 1. Concrete masonry units (CMU).
 - 2. Steel.
 - 3. Gypsum board
 - 4. Touch-up Prefinished Windows
- B. Related Requirements:
 - 1. Section 085200 "WOOD WINDOWS".
 - 2. Section 079200 "JOINT SEALANT"

1.3 DEFINITIONS

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.

- B. Product List: For each product indicated, include the following:
1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.
 3. VOC content.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials[, **from the same product run**, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Paint: **5** percent, but not less than **1 gal. unopened** of each material and color applied.

1.6 QUALITY ASSURANCE

- A. Mockups: Finish one jamb side of window for each color required to match existing surfaces
1. Final approval of color selections will be based on mockups.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than **45 deg F (7 deg C)**.
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.8 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between **50 and 95 deg F (10 and 35 deg C)**.
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than **5 deg F (3 deg C)** above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Manufacturers:** Subject to compliance with requirements, **available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:**

1. [Behr Process Corporation.](#)
2. [Benjamin Moore & Co.](#)
3. [M.A.B. Paints.](#)
4. [PPG Architectural Finishes, Inc.](#)
5. [Pratt & Lambert.](#)
6. [Rodda Paint Co.](#)
7. [Sherwin-Williams Company \(The\).](#)

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

- B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

- C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction[**and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24)**].

1. Flat Paints and Coatings: 50 g/L.
2. Nonflat Paints and Coatings: 150 g/L.
3. Primers, Sealers, and Undercoaters: 200 g/L.
4. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
5. Pretreatment Wash Primers: 420 g/L.

- D. Colors: **As selected by Architect from manufacturer's full range.** Generally, to match existing wall finishes

2.3 PRIMERS/SEALERS

- A. Primer Sealer, Interior, Institutional Low Odor/VOC: **MPI #149.**

2.4 METAL PRIMERS

- A. Primer, Rust-Inhibitive, Water Based: **MPI #107.**

2.5 WATER-BASED PAINTS

- A. Latex, Interior, Institutional Low Odor/VOC, (Gloss Level 3):[**MPI #145.**]

2.6 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
 2. Testing agency will perform tests for compliance with product requirements.
 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for conditions affecting performance of the Work.
- B. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust, and clean with hand tool wire brush (power grinding not permitted)
- E. Wood Substrates: Inspect Interior surface of prefinished windows clean and properly prepare for touch up as specified by window manufacturer

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 4. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

1. New wall surfaces and repairs:
 - a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, **MPI #149**.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, (Gloss Level 3), **MPI #145**.
2. Existing gyp.bd. and plaster wall surfaces:
 - a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, **MPI #149**.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, (Gloss Level 3), **MPI #145**.
3. Existing painted metal:
 - a. Prime Coat: Primer, Rust-Inhibitive, Water Based: **MPI #107**
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, (Gloss Level 3), **MPI #145**.
4. Existing painted concrete or cmu:
 - a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, **MPI #149**.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, (Gloss Level 3), **MPI #145**
5. Touch up existing prefinished windows
 - a. Manufacturer's recommended preparation, prime and finish to maintain warranty

END OF SECTION 099123



SIGN IN SHEET

Project: Marshallton Educational Center Window Replacement
DATE: / TIME: 02-08-18 / 9:00 AM

BSA+A Project # 17.019
Location: Marshallton Educational Center

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